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THE ABRIDGMENT 1913

CONTAINING THE ANNUAL ADDRESS OF THE PRESIDENT OF THE UNITED STATES TO THE TWO HOUSES OF CONGRESS

63D CONGRESS, 2D SESSION

WITH REPORTS OF DEPARTMENTS AND SELECTIONS FROM ACCOMPANYING PAPERS

IN TWO VOLUMES

VOL. I

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MESSAGE OF THE PRESIDENT.

Mr. Speaker, Mr. President, Gentlemen of the Congress:

In pursuance of my constitutional duty to "give to the Congress information of the state of the Union," I take the liberty of addressing you on several matters which ought, as it seems to me, particularly to engage the attention of your honorable bodies, as of all who study the welfare and progress of the Nation.

I shall ask your indulgence if I venture to depart in some degree from the usual custom of setting before you in formal review the many matters which have engaged the attention and called for the action of the several departments of the Government or which look to them for early treatment in the future, because the list is long, very long, and would suffer in the abbreviation to which I should have to subject it. I shall submit to you the reports of the heads of the several departments, in which these subjects are set forth in careful detail, and beg that they may receive the thoughtful attention of your committees and of all Members of the Congress who may have the leisure to study them. Their obvious importance, as constituting the very substance of the business of the Government, makes comment and emphasis on my part unnecessary.

The country, I am thankful to say, is at peace with all the world, and many happy manifestations multiply about us of a growing cordiality and sense of community of interest among the nations, foreshadowing an age of settled peace and good will. More and more readily each decade do the nations manifest their willingness to bind themselves by solemn treaty to the processes of peace, the processes of frankness and fair concession. So far the United States has stood at the front of such negotiations. She will, I earnestly hope and confidently believe, give fresh proof of her sincere adherence to the cause of international friendship by ratifying the several treaties of arbitration awaiting renewal by the Senate. In addition to these, it has been the privilege of the Department of State to gain the assent, in principle, of no less than 31 nations, representing four-fifths of the population of the world, to the negotiation of treaties by which it shall be agreed that whenever differences of interest or of policy arise which can not be resolved by the ordinary processes of diplomacy they shall be publicly analyzed, discussed, and reported upon by a tribunal chosen by the parties before either nation determines its course of action.

There is only one possible standard by which to determine controversies between the United States and other nations, and that is compounded of these two elements: Our own honor and our obligations to the peace of the world. A test so compounded ought easily to be made to govern both the establishment of new treaty obligations and the interpretation of those already assumed.

There is but one cloud upon our horizon. That has shown itself to the south of us, and hangs over Mexico. There can be no certain prospect of peace in America until Gen. Huerta has surrendered his usurped authority in Mexico; until it is understood on all hands, indeed, that such pretended governments will not be countenanced or dealt with by the Government of the United States. We are the friends of constitutional government in America; we are more than its friends, we are its champions; because in no other way can our neighbors, to whom we would wish in every way to make proof of our friendship, work out their own development in peace and liberty. Mexico has no Government. The attempt to maintain one at the City of Mexico has broken down, and a mere military despotism has been set up which has hardly more than the semblance of national authority. It originated in the usurpation of Victoriano Huerta, who, after a brief attempt to play the part of constitutional President, has at last cast aside even the pretense of legal right and declared himself dictator. As a consequence, a condition of affairs now exists in Mexico which has made it doubtful whether even the most elementary and fundamental rights either of her own people or of the citizens of other countries resident within her territory can long be successfully safeguarded, and which threatens, if long continued, to imperil the interests of peace, order, and tolerable life in the lands immediately to the south of us. Even if the usurper had succeeded in his purposes, in despite of the constitution of the Republic and the rights of its people, he would have set up nothing but a precarious and hateful power, which could have lasted but a little while, and whose eventual downfall would have left the country in a more deplorable condition than ever. But he has not succeeded. He has forfeited the respect and the moral support even of those who were at one time willing to see him succeed. Little by little he has been completely isolated. By a little every day his power and prestige are crumbling and the collapse is not far away. We shall not, I believe, be obliged to alter our policy of watchful waiting. And then, when the end comes, we shall hope to see constitutional order restored in distressed Mexico by the concert and energy of such of her leaders as prefer the liberty of their people to their own ambitions.

I turn to matters of domestic concern. You already have under consideration a bill for the reform of our system of banking and cur-

rency, for which the country waits with impatience, as for something fundamental to its whole business life and necessary to set credit free from arbitrary and artificial restraints. I need not say how earnestly I hope for its early enactment into law. I take leave to beg that the whole energy and attention of the Senate be concentrated upon it till the matter is successfully disposed of. And yet I feel that the request is not needed—that the Members of that great House need no urging in this service to the country.

I present to you, in addition, the urgent necessity that special provision be made also for facilitating the credits needed by the farmers of the country. The pending currency bill does the farmers a great service. It puts them upon an equal footing with other business men and masters of enterprise, as it should; and upon its passage they will find themselves quit of many of the difficulties which now hamper them in the field of credit. The farmers, of course, ask and should be given no special privilege, such as extending to them the credit of the Government itself. What they need and should obtain is legislation which will make their own abundant and substantial credit resources available as a foundation for joint, concerted local action in their own behalf in getting the capital they must use. It is to this we should now address ourselves.

It has, singularly enough, come to pass that we have allowed the industry of our farms to lag behind the other activities of the country in its development. I need not stop to tell you how fundamental to the life of the Nation is the production of its food. Our thoughts may ordinarily be concentrated upon the cities and the hives of industry, upon the cries of the crowded market place and the clangor of the factory, but it is from the quiet interspaces of the open valleys and the free hillsides that we draw the sources of life and of prosperity, from the farm and the ranch, from the forest and the mine. Without these every street would be silent, every office deserted, every factory fallen into disrepair. And yet the farmer does not stand upon the same footing with the forester and the miner in the market of credit. He is the servant of the seasons. Nature determines how long he must wait for his crops, and will not be hurried in her processes. He may give his note, but the season of its maturity depends upon the season when his crop matures, lies at the gates of the market where his products are sold. And the security he gives is of a character not known in the broker's office or as familiarly as it might be on the counter of the banker.

The Agricultural Department of the Government is seeking to assist as never before to make farming an efficient business, of wide cooperative effort, in quick touch with the markets for foodstuffs. The farmers and the Government will henceforth work together as real partners in this field, where we now begin to see our way very

clearly and where many intelligent plans are already being put into execution. The Treasury of the United States has, by a timely and well-considered distribution of its deposits, facilitated the moving of the crops in the present season and prevented the scarcity of available funds too often experienced at such times. But we must not allow ourselves to depend upon extraordinary expedients. We must add the means by which the farmer may make his credit constantly and easily available and command when he will the capital by which to support and expand his business. We lag behind many other great countries of the modern world in attempting to do this. Systems of rural credit have been studied and developed on the other side of the water while we left our farmers to shift for themselves in the ordinary money market. You have but to look about you in any rural district to see the result, the handicap and embarrassment which have been put upon those who produce our food.

Conscious of this backwardness and neglect on our part, the Congress recently authorized the creation of a special commission to study the various systems of rural credit which have been put into operation in Europe, and this commission is already prepared to report. Its report ought to make it easier for us to determine what methods will be best suited to our own farmers. I hope and believe that the committees of the Senate and House will address themselves to this matter with the most fruitful results, and I believe that the studies and recently formed plans of the Department of Agriculture may be made to serve them very greatly in their work of framing appropriate and adequate legislation. It would be indiscreet and presumptuous in anyone to dogmatize upon so great and many-sided a question, but I feel confident that common counsel will produce the results we must all desire.

Turn from the farm to the world of business which centers in the city and in the factory, and I think that all thoughtful observers will agree that the immediate service we owe the business communities of the country is to prevent private monopoly more effectually than it has yet been prevented. I think it will be easily agreed that we should let the Sherman antitrust law stand, unaltered, as it is, with its debatable ground about it, but that we should as much as possible reduce the area of that debatable ground by further and more explicit legislation; and should also supplement that great act by legislation which will not only clarify it but also facilitate its adminstration and make it fairer to all concerned. No doubt we shall all wish, and the country will expect, this to be the central subject of our deliberations during the present session; but it is a subject so many-sided and so deserving of careful and discriminating discussion that I shall take the liberty of addressing you upon it in a special message at a later date than this. It is of capital importance that the business

men of this country should be relieved of all uncertainties of law with regard to their enterprises and investments and a clear path indicated which they can travel without anxiety. It is as important that they should be relieved of embarrassment and set free to prosper as that private monopoly should be destroyed. The ways of action should be thrown wide open.

I turn to a subject which I hope can be handled promptly and without serious controversy of any kind. I mean the method of selecting nominees for the Presidency of the United States. I feel confident that I do not misinterpret the wishes or the expectations of the country when I urge the prompt enactment of legislation which will provide for primary elections throughout the country at which the voters of the several parties may choose their nominees for the Presidency without the intervention of nominating conventions. I venture the suggestion that this legislation should provide for the retention of party conventions, but only for the purpose of declaring and accepting the verdict of the primaries and formulating the platforms of the parties; and I suggest that these conventions should consist not of delegates chosen for this single purpose, but of the nominees for Congress, the nominees for vacant seats in the Senate of the United States, the Senators whose terms have not yet closed, the national committees, and the candidates for the Presidency themselves, in order that platforms may be framed by those responsible to the people for carrying them into effect.

These are all matters of vital domestic concern, and besides them, outside the charmed circle of our own national life in which our affections command us, as well as our consciences, there stand out our obligations toward our territories over sea. Here we are trustees. Porto Rico, Hawaii, the Philippines, are ours, indeed, but not ours to do what we please with. Such territories, once regarded as mere possessions, are no longer to be selfishly exploited; they are part of the domain of public conscience and of serviceable and enlightened statesmanship. We must administer them for the people who live in them and with the same sense of responsibility to them as toward our own people in our domestic affairs. No doubt we shall successfully enough bind Porto Rico and the Hawaiian Islands to ourselves by ties of justice and interest and affection, but the performance of our duty toward the Philippines is a more difficult and debatable matter. We can satisfy the obligations of generous justice toward the people of Porto Rico by giving them the ample and familiar rights and privileges accorded our own citizens in our own territories and our obligations toward the people of Hawaii by perfecting the provisions for self-government already granted them, but in the Philippines we must go further. We must hold steadily in view their ultimate independence, and we must move toward the time of

that independence as steadily as the way can be cleared and the foundations thoughtfully and permanently laid.

Acting under the authority conferred upon the President by Congress, I have already accorded the people of the islands a majority in both houses of their legislative body by appointing five instead of four native citizens to the membership of the commission. I believe that in this way we shall make proof of their capacity in counsel and their sense of responsibility in the exercise of political power, and that the success of this step will be sure to clear our view for the steps which are to follow. Step by step we should extend and perfect the system of self-government in the islands, making test of them and modifying them as experience discloses their successes and their failures; that we should more and more put under the control of the native citizens of the archipelago the essential instruments of their life, their local instrumentalities of government, their schools, all the common interests of their communities, and so by counsel and experience set up a government which all the world will see to be suitable to a people whose affairs are under their own control. At last, I hope and believe, we are beginning to gain the confidence of the Filipino peoples. By their counsel and experience, rather than by our own, we shall learn how best to serve them and how soon it will be possible and wise to withdraw our supervision. Let us once find the path and set out with firm and confident tread upon it and we shall not wander from it or linger upon it.

A duty faces us with regard to Alaska which seems to me very pressing and very imperative; perhaps I should say a double duty, for it concerns both the political and the material development of the Territory. The people of Alaska should be given the full Territorial form of government, and Alaska, as a storehouse, should be unlocked. One key to it is a system of railways. These the Government should itself build and administer, and the ports and terminals it should itself control in the interest of all who wish to use them for the service and development of the country and its people.

But the construction of railways is only the first step; is only thrusting in the key to the storehouse and throwing back the lock and opening the door. How the tempting resources of the country are to be exploited is another matter, to which I shall take the liberty of from time to time calling your attention, for it is a policy which must be worked out by well-considered stages, not upon theory, but upon lines of practical expediency. It is part of our general problem of conservation. We have a freer hand in working out the problem in Alaska than in the States of the Union; and yet the principle and object are the same, wherever we touch it. We must use the resources of the country, not lock them up. There need be no conflict or jealousy as between State and Federal authorities, for

there can be no essential difference of purpose between them. The resources in question must be used, but not destroyed or wasted; used, but not monopolized upon any narrow idea of individual rights as against the abiding interests of communities. That a policy can be worked out by conference and concession which will release these resources and yet not jeopard or dissipate them, I for one have no doubt; and it can be done on lines of regulation which need be no less acceptable to the people and governments of the States concerned than to the people and Government of the Nation at large, whose heritage these resources are. We must bend our counsels to this end. A common purpose ought to make agreement easy.

Three or four matters of special importance and significance I beg that you will permit me to mention in closing.

Our Bureau of Mines ought to be equipped and empowered to render even more effectual service than it renders now in improving the conditions of mine labor and making the mines more economically productive as well as more safe. This is an all-important part of the work of conservation; and the conservation of human life and energy lies even nearer to our interest than the preservation from waste of our material resources.

We owe it, in mere justice to the railway employees of the country, to provide for them a fair and effective employers' liability act; and a law that we can stand by in this matter will be no less to the advantage of those who administer the railroads of the country than to the advantage of those whom they employ. The experience of a large number of the States abundantly proves that.

We ought to devote ourselves to meeting pressing demands of plain justice like this as earnestly as to the accomplishment of political and economic reforms. Social justice comes first. Law is the machinery for its realization and is vital only as it expresses and embodies it.

An international congress for the discussion of all questions that affect safety at sea is now sitting in London at the suggestion of our own Government. So soon as the conclusions of that congress can be learned and considered we ought to address ourselves, among other things, to the prompt alleviation of the very unsafe, unjust, and burdensome conditions which now surround the employment of sailors and render it extremely difficult to obtain the services of spirited and competent men such as every ship needs if it is to be safely handled and brought to port.

May I not express the very real pleasure I have experienced in cooperating with this Congress and sharing with it the labors of common service to which it has devoted itself so unreservedly during the past seven months of uncomplaining concentration upon the business of legislation? Surely it is a proper and pertinent part of

my report on "the state of the Union" to express my admiration for the diligence, the good temper, and the full comprehension of public duty which has already been manifested by both the Houses; and I hope that it may not be deemed an impertinent intrusion of myself into the picture if I say with how much and how constant satisfaction I have availed myself of the privilege of putting my time and energy at their disposal alike in counsel and in action.

ANNUAL REPORT ON THE FINANCES.

TREASURY DEPARTMENT,
Washington, December 1, 1913.

SIR: The Secretary of the Treasury has the honor to make the following report:

FINANCIAL AID TO DAYTON, OHIO.

In the latter part of March, 1913, a great storm swept over the Ohio Valley, causing disastrous floods, from which the city of Dayton, Ohio, became a special sufferer. So serious were the losses, that, as the waters began to recede, the banks in that city were afraid to reopen their doors because of the temporary impairment of confidence—subsequently happily dissipated—in the recuperative powers of the city and in the ability of the banks to meet the extraordinary demands which might be made upon them.

On the 4th of April, 1913, a telegram was received from the chairman of the Citizens' Relief Committee, asking that a representative of the Department "be sent right away to see about financing our banking institutions," etc. A national-bank examiner was immediately dispatched to Dayton, and within twenty-four hours after his arrival, and upon his recommendation, the Department designated every national bank in the city of Dayton as a Government depositary, and announced that it would deposit in said national banks $2,000,000 of Government funds, to be secured by State, municipal, or other local bonds acceptable to the Secretary of the Treasury. The effect of this action was to restore confidence at once. The banks reopened their doors, and instead of the anticipated need of $2,000,000, the Treasury was called on for only $182,000.

$500,000,000 EMERGENCY CURRENCY ANNOUNCEMENT.

A special session of Congress convened on April 7, 1913, and immediately began to consider the important questions of tariff and currency reform. The vast economic changes involved in these two important questions had the natural effect of causing in many quarters apprehension as to the possible effects of the anticipated legislation. A feeling of unrest began to pervade business circles. This was accentuated by a certain propaganda of pessimism which, whether designedly or not, produced a condition of extreme nervousness and

tension. In the early part of June this assumed a serious aspect. Complaints began to reach the Department from many parts of the country that credits were being restricted, and that it was increasingly difficult to secure funds for the normal needs of legitimate business. To what extent these reports were justified there was no exact means of ascertaining, but the general conditions indicated a more or less acute state of affairs. In order to relieve anxiety and to let the business interests of the country understand that there was no occasion for unreasonable restriction of credits, and to destroy apprehension based upon unjustifiable fears, and to assure the country that the means were at hand to cope successfully with any situation that might arise, the Secretary announced that there was actually on hand in the Treasury and ready for immediate delivery to any and every bank complying with the requirements of the law, five hundred million dollars ($500,000,000) in new national-bank note currency, which the Secretary said he would not hesitate to issue under the provisions of the Aldrich-Vreeland Act of May 30, 1908, to banks making application therefor in accordance with the terms of that act. The relief occasioned by this announcement was instantaneous. Confidence of the banks in their ability to meet the demands of their customers was largely restored and the unfavorable symptoms promptly disappeared. So completely effective was this action that none of the five hundred million dollars ($500,000,000) of currency was applied for by the banks.

CROP-MOVING DEPOSITS.

Toward the latter part of July symptoms of uneasiness began to reappear. There was much talk about the difficulty of moving the fall crops and the annual apprehension on this score began to stalk about the country with more than usual vigor. It is a characteristic of our imperfect and unsatisfactory banking system that the very prosperity of the country becomes, at times, a menace, because of the apprehended inability of the banks to meet the seasonal demand for the large amounts of money required to move a bounteous harvest. Conditions were again becoming acute when the Secretary determined to deposit from twenty-five millions to fifty millions of dollars of Government funds in the national banks in those parts of the country where the necessity for funds to move the crops existed. The Secretary announced that, as security for such deposits, high-class commercial paper would be accepted at 65 per cent of its face value, bearing the indorsement of the depositary bank. This was an unprecedented step, because commercial paper had never before been accepted as security for Government deposits. It was, however, a necessary and highly beneficial step, because it enabled the banks to obtain the required funds upon the pledge of available paper

already in their vaults. If the banks had been obliged to secure these deposits with Government bonds or other fixed investments, the relief would not have been effective, because many of the banks would have been compelled to use the deposits for the purchase of the bonds required by the Government as security.

In order to distribute intelligently the crop-moving deposits, three conventions of bankers were held at the Treasury Department in Washington during August, 1913, the first composed of bankers from the South and Southwestern States; the second composed of bankers from the Middle Western and Northwestern States; the third composed of bankers from the Pacific Coast and Rocky Mountain States. It was not necessary to extend aid to the Eastern States, although the Department was ready to do so if it had been required.

It was essential that the action of the Department should be nonpartisan and nonpolitical; the crops of Republicans, Democrats, Progressives, and all other classes of the people, had to be moved, and the earnest desire of the Department was to have the benefits of this action diffused as widely and impartially as possible. The clearing-house associations in each of the cities invited to participate in the conferences were asked, therefore, to name the delegates. A most interesting and intelligent body of men assembled in Washington and discussed with the Secretary and Assistant Secretary Williams (in charge of the fiscal bureaus) the needs of their several communities and sections. As a result, allotment of these funds was made upon the basis of the testimony of their several representatives, as follows:

South and Southwest	$22,550,000
Middle and Northwest	19,000,000
Pacific Coast and Rocky Mountain	4,950,000
Total	46,500,000

The Department, having no machinery for the investigation of local credits, was obliged to rely upon the banks in the larger cities as instrumentalities for the distribution of Government funds to the banks in the smaller communities. In the discussions at Washington, the representatives of the banks were urged to pass the Government funds on to their country correspondents upon reasonable terms. The Secretary is gratified to be able to say that in most instances this was done upon a basis that seemed fair to all concerned.

The effect of this action was highly beneficial. Confidence was restored. The readiness of the Government to meet every reasonable need of the banks for the legitimate purposes of crop moving had the happy effect, so the Department is informed, of causing much hoarded money to be deposited in the banks. This increased their ability to take care of their customers, and caused a decided relaxation in the demands of country correspondents for accommodation, which,

prior to the announcement of the Secretary, had been much greater than usual, because the small banks were attempting, very naturally, to impound all the funds they could get to make them safe against the anticipated stringency. The moment it became known that the Government stood ready to assist, the tension was relieved, business resumed a normal aspect, and the fall movement of crops, trade, and commerce proceeded upon an easier and safer basis than for many years past.

It is interesting to note that of the fifty million dollars which the Department offered to place in the banks for crop-moving purposes, only $34,661,000 had been called for up to November 25, 1913. These funds will be gradually repaid to the Treasury beginning in January, 1914.

CURRENCY LEGISLATION.

The psychological and practical value of these incidents can not be overestimated. They demonstrate clearly that any improvement in our financial system which will permanently establish confidence will in itself be an immense gain, and if that improved financial system assures the opportunity to secure at all times the necessary funds and credits to meet the expanding and legitimate needs of the commerce and industry of the country, it will be an achievement of enduring benefit.

These incidents also show conclusively the enormous value of an altruistic governmental agency in the financial affairs of the country. So long as the Government has the power to intervene in a beneficent and unselfish way, the danger of panics and of unjust practices will be largely, if not wholly, destroyed. This is one of the chief objects sought in the proposed reformation and reorganization of our banking and currency system. The people of the country are to be congratulated upon the early prospect of sound legislation on this vitally important subject. Should the Congress enact the fundamentals of the pending measure, it is believed that permanent protection will be provided against recurring commercial crises and that adequate facilities will be created for that legitimate and sound expansion of credits so vital to the prosperity of our great and growing country.

It has been, and will continue to be, the policy and purpose of the Secretary to exercise all the powers of the Department for the protection of the public and the legitimate business interests of the country.

INTEREST ON GOVERNMENT DEPOSITS.

Prior to 1908 interest had never been required on Government deposits. After the act of 1908 interest at the rate of 1 per cent per annum was collected on so-called " inactive accounts " in national banks. By " inactive accounts " is meant a special deposit (usually

$1,000) which remains fixed or stationary in amount. The aggregate of such accounts on the 1st day of June, 1913, was $1,286,500, and the entire amount of interest collected by the Government thereon during the preceding period of about five years was approximately $715,000.

On April 30, 1913, the Secretary announced that beginning June 1, 1913, all Government depositaries, active as well as inactive, would be required to pay interest at the rate of 2 per cent per annum on Government funds. Only 9 of the total number of national banks holding Government deposits refused to pay interest under the new regulation.

Hundreds of applications were received from other banks seeking Government deposits on the new terms, many of which were granted. The Government has not had the slightest difficulty in placing its deposits at 2 per cent interest.

On the 1st of November, 1913, the total amount of Government funds on deposit in national banks was reported at $98,334,917.36, which, if this average balance should be retained, would add to the net revenues of the Government approximately two million dollars ($2,000,000) per annum.

A careful calculation has been made of the amount of public money on deposit in national banks throughout the country for the 16 years preceding the 4th of March, 1913, namely, from 1897 to 1913, and it has been found that if the present policy of charging 2 per cent interest on such deposits had been established in 1897, the Government would have received during that 16-year period a total of about $30,610,381.

INCOME TAX.

The passage of the income-tax law on the 3d of October, 1913, placed new duties and great responsibilities on the Treasury Department. This law went into effect immediately with the proviso that collections at the source should begin on the 1st day of November, 1913. Only 28 days, therefore, were allowed the Department within which to prepare regulations covering the collection of the tax at the source. Many intricate and difficult problems are involved in the initiation of a new law so far-reaching in its effects and so complicated in its operations. The Department, however, took vigorous hold of the matter, and on October 25 issued the first of the series of necessary regulations, namely, those governing the collection of the tax, at the source, on coupon and registered interest payments on bonded debts of corporations, etc. Supplementary regulations are being issued from time to time, relating to other features and phases of the law. The additional organization required for the administration of this law is being created as rapidly as possible. A certain

amount of confusion and inconvenience at the beginning is unavoidable, but every effort of the Department will be exerted fairly and justly to interpret, elucidate, and administer the law in a reasonable spirit.

It is estimated that there are 425,000 individuals subject to the income tax. The number of corporations making returns to the Department for the calendar year 1912 was 305,336, but of these, 244,220 claimed no income or a net income of less than $5,000 and were, therefore, not subject to taxation. Under the new law, all corporations having any net earnings whatever are subject to the payment of an income tax, whether their earnings be more or less than $5,000. It is expected, therefore, that approximately 150,000 corporations which have heretofore been exempt will now be required to pay an income tax.

CUSTOMS SERVICE.

The principal achievement of the Customs Service in the fiscal year 1913 was the reorganization of that service under the Executive order dated March 3, 1913, in pursuance of the authority granted in the act of Congress approved April 23, 1912.

Prior to this reorganization there were 126 customs districts and 38 independent ports. The limits of many districts were not clearly defined, and some of the districts overlapped, while large portions of territory were not included within any customs district. By the reorganization, the entire country was included in 49 customs districts, each with clearly defined limits, and all ports were included in one or another of these districts and subjected to the control and supervision of the collector appointed for the district.

The system of compensating collectors of customs through fees, storage charges, and other emoluments was abolished, and all collectors were placed on a salary basis payable by the Government, all fees collected being required to be deposited and accounted for to the credit of the United States.

By the reorganization, the right of certain collectors of customs to sell blank forms at 10 cents each, solely for their own account and benefit, was taken away. Prior to the reorganization, those having business with the customhouses where this practice was permitted found it expedient to purchase their forms from collectors at a price ten or more times their actual value. Such forms are, under the reorganization, being sold at 1 cent each, and the proceeds are deposited to the credit of the Treasury.

The reorganization as it actually went into effect on July 1, 1913, was, on a basis of expense, $356,000 annually less than the prior organization.

During the latter part of the fiscal year 1913, when revision of the tariff was under consideration by Congress, this Depart-

ment closely followed the legislation as formulated, in order to be in the best position properly to administer the law when enacted, and cooperated with the various committees of Congress by furnishing such expert advice as it was able to command through its various officers and employees familiar with tariff legislation and the administration of the customs laws.

The tariff act, materially reducing the rates of duty, went into effect on October 4, 1913, without any delays or inconvenience to business, other than the slight delay occasioned by the large volume of warehouse withdrawals, due to the congestion of merchandise which had been stored in bonded warehouses pending the passage of the new act, and the natural rush to withdraw the same immediately after the act became effective. While the new act will be simpler of application than the act of 1909, the present indications are that the volume of imports will largely increase, and that the change from specific to ad valorem rates will require considerable adjustment in the customs force to meet the new conditions. The measure has not been in force for a sufficient length of time to make possible an accurate estimate of its ultimate revenue-producing powers.

Convention of customs collectors.

In view of the reorganization and consolidation of the customs service, and of the new tariff act, it seemed advisable to call a convention of the collectors of customs in all parts of the country, including Hawaii and Porto Rico, for the purpose of devising new methods for increasing efficiency, reducing expenses, and eliminating useless and unnecessary processes, as well as to diffuse a uniform and common understanding of the requirements of the new law, to reimpress collectors of customs with the importance of their duties, and to establish more effective means of cooperation in the common work. This convention, the first of its kind ever held, was eminently successful. The interchange of views, and the consideration of the problems involved, will result in the elimination of useless efforts, a saving in expenditures, and the standardizing of the work and rates of compensation paid for similar services at the various ports of entry.

CHANGE IN THE MANNER OF HANDLING AND DISBURSING PUBLIC FUNDS.

On the 9th of January, 1913, former Secretary MacVeagh issued Department Circular No. 5, which inaugurated a radical change in the manner of handling and disbursing the public funds. The objects to be accomplished were announced as follows:

For the purpose of bringing the ordinary fiscal transactions of the Federal Government more nearly into harmony with present business practices, it has been determined that the daily receipts of the Government shall be placed with

the national-bank depositaries to the credit of the Treasurer of the United States. Disbursements will be made by warrant or check drawn on the Treasurer, but payable by national-bank depositaries, as well as by the Treasurer and subtreasuries.

The new system of accounting went into operation on February 1, 1913, and, as usual in such changes, complications, confusion, and delays attended its introduction, causing some embarrassment, but gradually the difficulties at first encountered are disappearing, and the system appears to respond to the public requirements, and to be accomplishing the purposes for which it was devised.

PUBLIC HEALTH SERVICE.

The attention of the Congress is invited to the report of the Surgeon General upon the operations of the Public Health Service. The importance of this service can not be overestimated. It is daily growing in usefulness. Through the Public Health Service we are securing real conservation of our human resources, the first of all of our natural resources. Conservation of our material natural resources will be enhanced and simplified if conservation of our human natural resources is of the right sort. A vigorous, virile, and healthful race is of superlative importance. By a wise enlargement of the functions and a rational extension of the facilities of the Public Health Service through constantly generous, but not prodigal, appropriations this vital end may be achieved.

NEW REVENUE CUTTERS.

The Congress is respectfully urged to grant the necessary authority and appropriation for the prompt construction of four new revenue cutters. The service is being seriously crippled for lack of these ships. The necessity for them is imperative.

COAST GUARD.

Suggestions frequently have been made for the consolidation of the Revenue-Cutter Service and the Life-Saving Service into one organization, to be known as the "Coast Guard," for the purpose of increasing the efficiency of these two kindred branches of the Government, each of which is engaged in highly important humanitarian work in time of peace. The Life-Saving Service will by this means secure a military status and will become a first naval reserve in time of war. Attention is invited to the remarks of the Captain Commandant of the Revenue-Cutter Service on this subject, which are incorporated in the abstracts of reports of bureaus and divisions attached to this report. The Secretary is of the firm belief that the organization of a Coast Guard, as proposed, would be a wise act and constructive administration of the best sort. Unless this is done the personnel of the Life-Saving Service will deteriorate, and there will be increasing diffi-

culty in maintaining the service at a reasonable point of efficiency. The humanitarian achievements alone of the combined Revenue-Cutter and Life-Saving Services, as evidenced by 4,423 human lives rescued from peril in the year 1913, justifies, if it does not require, the earnest and powerful support of the Congress. On the material side, the amount of property saved, or to which assistance was rendered, in the year 1913 alone, was $16,659,545. Material considerations combine with the humanitarian to emphasize the necessity for maintaining and improving this splendid service—a service unapproached in its unique and useful functions by that of any other nation in the world.

ICE PATROL.

During the months of April, May, and June last, the ice region in the North Atlantic Ocean was patrolled by the revenue cutters *Seneca* and *Miami*, and warnings of the location of dangerous icebergs and floes were sent out by radio to the east and west bound trans-Atlantic steamships. The duty was performed at the urgent solicitation of the maritime associations at the principal seaports on the Atlantic Coast. It is now nearly two years since the loss of the *Titanic*, and during both ice seasons since that lamentable affair the patrol has been maintained practically by the United States Government alone.

This patrol should be discontinued, and the important maritime nations should unite in defining lanes of travel across the North Atlantic, so as to avoid all danger of icebergs during the months of April, May, and June of each year, and compel the steamship companies to observe them. This would result in increasing, to some extent, the time of ocean passage during these three months, but it would, on the other hand, insure immunity from the dangers of icebergs during this season. The steamship companies should not be permitted to jeopardize needlessly human life for the purpose of shortening the trans-Atlantic journey by a few hours and saving a comparatively few dollars; but if they are, then they should be compelled to maintain an effective ice patrol at their own cost. Failing this, it would appear equitable that each of the maritime nations concerned should, in the future, perform its share of this duty if it be determined to maintain this patrol. This matter is to be brought to the attention of the International Conference on Safety at Sea, now in session at London, by the American delegate representing this Department.

SAVING OF LIFE AND PROPERTY ON INTERIOR NAVIGABLE RIVERS AND WATERS.

The annual overflowing of the Ohio and Mississippi Rivers and their tributaries, the great loss of life and property incident thereto, and the necessity, as evidenced last year, of sending from the Great

Lakes and the Atlantic ports skilled men and life-saving apparatus to aid in saving lives in the inundated regions, present a legitimate field for the operations of the Revenue-Cutter Service. Three typical light-draft river steamers should be constructed and equipped as revenue cutters; each of these craft provided with not less than 4 powerful motor lifeboats, and with such other life-saving appliances as may be necessary for work along the rivers. During the flood seasons, these cutters should be directed to follow the crest of the flood from Pittsburgh down to the mouth of the Mississippi, and there is but little doubt that their services would be of great value in rescuing lives and property, and in distributing food and clothing to marooned people. During flood times surgeons could be detailed to the cutters to render medical aid where needed. When floods are not raging, the 3 cutters could be very efficiently used in patrol of these inland waters for the enforcement of the navigation and motor-boat laws, and in rendering aid to vessels in distress.

Headquarters should be established at Louisville or Cincinnati on the Ohio, at St. Louis on the Upper Mississippi, and at Helena, Ark., or Vicksburg, Miss., on the Lower Mississippi.

Cutters of this type can be constructed and properly equipped for $80,000 each, or a total of $240,000 for the three. The annual cost of maintenance would be approximately $80,000 for the 3 cutters, a small sum to expend for the saving of life and property when compared with the vast sums annually lost through these floods.

PANAMA CANAL.

Transactions in the finances of the Government during the fiscal year favored the maintenance of an adequate working balance in the Treasury, and it was therefore unnecessary to sell additional bonds for the construction of the Panama Canal. Expenditures on the waterway during the year, amounting to $41,741,258.03, were paid out of the general fund of the Treasury. The total net balance so expended from the general fund to June 30, 1913, reimbursable from the proceeds of bonds not yet sold, was $179,627,617.07.

PUBLIC BUILDINGS COMMISSION.

The public buildings act, approved March 4, 1913, provided for a commission, with the Secretary of the Treasury as chairman, which shall "present to Congress a connected scheme, involving annual appropriations for the construction and completion of public buildings heretofore authorized within a reasonable time, and shall frame a standard or standards by which the size and cost of public buildings shall, as far as practicable, be determined, and shall report as to the adaptability in size, accommodations, and cost of buildings hitherto authorized to the requirements of the communities in which they are

to be located, and also whether the existing appropriations should be increased or diminished to meet such requirements."

This commission has been organized and its work is well under way. A careful and thorough investigation of this important subject, in all of its phases, has been undertaken, and promises to produce excellent results. The report of the commission will, if possible, be transmitted to the Congress before the close of the fiscal year.

CENTRAL HEATING AND POWER PLANT.

The sundry civil act, approved June 23, 1913, authorizes the construction of a central heating and power plant and places the direction of this very important project in the hands of this Department. This plant will furnish heat, light, and power for the old and new buildings of the Bureau of Engraving and Printing, the buildings of the Department of Agriculture, the Treasury Building, the White House and the buildings on its grounds, the State, War and Navy Building, the Winder Building, the Mills Building, the Court of Claims Building, the new and old buildings for the National Museum, the Smithsonian Building, the Army Medical Museum Building, the Fish Commission Building, the Washington Monument, the District Building, the Post Office Department Building, and the buildings, when constructed, for the Departments of State, Justice, Commerce, and Labor.

At the time this plant is completed, it will undoubtedly be required to serve the new Interior Department office building authorized to be constructed on the site at Eighteenth and F Streets, the Lincoln Memorial, and any similar buildings or structures which may be authorized in the interim.

The Department is now preparing to carry into effect the provisions of the existing legislation and arrange for the construction of this plant.

CONTINGENT FUND.

The "Contingent fund for the Secretary of the Treasury" for the current fiscal year is $20,000. This sum is wholly inadequate to do the effective work which can and ought to be done in the public interest. The activities of the Treasury Department are so great and varied, and are increasing so much with the rapid growth of the country and with the new duties and responsibilities imposed upon the Department—such, for instance, as the new income-tax law—that the Secretary should at all times have a sufficient fund to enable him to make effective investigations in any part of the country that will enable him to improve the administrative methods of the Department, to eradicate abuses, and to protect the public interest. It is earnestly hoped that the Congress will grant an appropriation of $50,000 for the contingent fund.

FINANCES.

The following statements showing receipts, disbursements, estimates, and the condition of the Treasury are submitted:

RECEIPTS AND DISBURSEMENTS.

Fiscal year 1913

The receipts and disbursements of the Government during the fiscal year ended June 30, 1913, were as follows:

(See details on pp. 18 to 23.)

GENERAL FUND.

Receipts into the general fund, including various trust-fund receipts, but excluding postal revenues:		
Customs		$318,891,395.86
Internal revenue—		
Ordinary	$309,410,665.81	
Corporation tax	35,006,299.84	
		344,416,965.65
Sales of public lands		2,910,204.69
Miscellaneous		57,892,663.64
Total ordinary receipts		724,111,229.84
Disbursements from the general fund for current expenses and capital outlays, including various trust-fund disbursements, but excluding postal and Panama Canal disbursements:		
For civil establishment—		
Legislative establishment	13,291,813.52	
Executive office	592,014.73	
State Department	4,978,380.09	
Treasury Department proper	48,092,168.39	
Public buildings, construction and sites	14,021,781.21	
War Department, civil	2,220,460.24	
Department of Justice	10,423,632.19	
Post Office Department proper	2,169,340.97	
Postal deficiencies for prior years	1,027,368.79	
Navy Department, civil	829,554.96	
Interior Department proper	22,383,756.70	
Department of Agriculture	20,469,027.70	
Department of Commerce	11,263,457.08	
Department of Labor [1]	3,347,380.11	
Independent offices	2,878,325.95	
District of Columbia	12,841,210.79	
	170,829,673.42	
For military establishment, including rivers and harbors, forts, arsenals, seacoast defenses, and miscellaneous	160,387,452.85	

[1] Includes all expenditures made during 1913 for bureaus and offices transferred to the Department of Labor.

Disbursements from the general fund for current expenses and capital outlays, etc.—Continued.		
For naval establishment, including construction of new vessels, machinery, armament, equipment, improvement at navy yards, and miscellaneous	$133,262,861.97	
For Indian service	20,306,158.90	
For pensions	175,085,450.29	
For interest on the public debt	22,899,108.08	
Total ordinary disbursements		$682,770,705.51
Excess of ordinary receipts		41,340,524.33
Panama Canal disbursements:		
Disbursements for canal provided from general fund		41,741,258.03
Excess of disbursements including the Panama Canal		400,733.70
Issues and redemptions of public debt:		
National-bank note fund—		
Redemptions	$24,089,035.50	
Receipts	21,471,010.00	
Excess of redemptions over receipts		2,618,025.50
Miscellaneous redemptions		102,575.00
		3,121,334.20
Postal savings—		
Proceeds of bonds issued on savings deposits		1,929,840.00
Total excess of disbursements over receipts into general fund		1,191,494.20
General-fund balances:		
Balance in general fund June 30, 1912		167,152,478.99
Excess of general-fund disbursements for year		1,191,494.20
Balance in general fund June 30, 1913		165,960,984.79

SUMMARY OF GENERAL-FUND TRANSACTIONS.

Fiscal year ended June 30, 1913.

	Receipts.	Disbursements.
Ordinary receipts, including various trust-fund receipts, but excluding postal revenues	$724,111,229.84	
Disbursements for current expenses and capital outlays, including various trust-fund disbursements, but excluding postal and Panama Canal disbursements		$682,770,705.51
Panama Canal disbursements		41,741,258.03
National-bank note fund:		
Receipts	21,471,010.00	
Redemptions		24,089,035.50
Miscellaneous redemptions of the public debt		102,575.00
Receipts, postal savings bonds	1,929,840.00	
Total receipts into the general fund	747,512,079.84	
Excess of disbursements over receipts	1,191,494.20	
Grand totals	748,703,574.04	748,703,574.04

Postal Service.

Exclusive of Post Office Department proper, which is included in "civil establishment."

Postal revenue receipts	$266,615,525.65
Postal service paid from postal revenues of the year	262,108,874.74
Excess of postal receipts	4,510,650.91
Grants from the Treasury were made during the year for deficiencies in the postal revenues of prior years amounting to	1,027,368.79

United States Notes (Greenbacks).

Issues to replace worn and mutilated notes	163,000,000.00
Worn and mutilated notes retired	163,000,000.00

The redemptions during the year of the notes unfit for circulation necessitated the issue of a like amount thereof to maintain the outstanding aggregate of the notes as required by law.

Gold Reserve Fund.

Balance in reserve fund June 30, 1912	$150,000,000.00
Balance in reserve fund June 30, 1913	150,000,000.00

The redemptions of notes for gold from the reserve fund during the year were: United States notes, $67,850,957, and Treasury notes of 1890, $67,830, a total of $67,918,787.

As the redeemed notes were exchanged each day for gold in the general fund, the reserve was maintained at the fixed sum of $150,000,000 required by law.

Trust Funds.

Reserved against outstanding gold and silver certificates and Treasury notes of 1890.

Issues:		
Gold certificates issued	$468,730,000.00	
Silver certificates issued	403,952,000.00	
Total set aside in trust funds		$872,682,000.00
Redemptions:		
Gold certificates redeemed	421,840,200.00	
Silver certificates redeemed	401,951,000.00	
Treasury notes of 1890 redeemed	269,000.00	
Total redemptions paid out of trust funds		824,060,200.00
Increase in trust funds during year		48,621,800.00

Of the certificates issued the sum of $823,791,200 was to replace worn and unfit certificates presented for redemption; and Treasury notes of 1890, amounting to $269,000, were redeemed and retired, the net result being an increase in the trust funds of $48,621,800.

Balances in trust funds June 30, 1912	1,524,535,369.00
Balances in trust funds June 30, 1913	1,573,157,169.00

SINKING FUND.

The securities redeemed on account of the sinking fund, included in general-fund disbursements, were as follows:

Fractional currency	$1,545.00
1-year notes of 1863	30.00
2-year notes of 1863	50.00
Old demand notes	130.00
Compound-interest notes	190.00
Refunding certificates	480.00
Funded loan of 1907	99,950.00
Ten-forties of 1864	100.00
Total	102,475.00

CONDITION OF THE TREASURY JUNE 30, 1913.

The public debt of the United States at the close of the fiscal year, as stated in the debt statement of June 30, 1913, is set forth in detail as follows:

Interest-bearing debt:		
Loan of 1925, 4 per cent	$118,489,900.00	
Loan of 1908–1918, 3 per cent	63,945,460.00	
Consols of 1930, 2 per cent	646,250,150.00	
Panama Canal loan, 2 per cent	84,631,980.00	
Panama Canal loan, 3 per cent	50,000,000.00	
Postal savings bonds, 2½ per cent	2,389,120.00	
		$965,706,610.00
Debt on which interest has ceased:		
Funded loan of 1891	28,650.00	
Loan of 1904	13,250.00	
Funded loan of 1907	700,400.00	
Refunding certificates	13,570.00	
Old debt	903,680.26	
		1,659,550.26
Debt bearing no interest:		
United States notes (greenbacks)	346,681,016.00	
National-bank notes, redemption account	22,092,806.00	
Old demand notes	53,152.50	
Fractional currency	6,854,609.90	
		375,681,584.40
Total interest and noninterest-bearing debt		1,343,047,744.66
Certificates and notes issued on deposits of coin and silver bullion:		
Gold certificates	[1]1,086,947,169.00	
Silver certificates	483,550,000.00	
Treasury notes of 1890	2,660,000.00	
		1,573,157,169.00
Total debt June 30, 1913		2,916,204,913.66

[1] Including $220,000 gold certificates issued June 30, 1913; advices not received in time for inclusion in the public-debt statement of that date.

CASH IN THE TREASURY JUNE 30, 1913.

[From revised statements.

Reserve fund:			
Gold coin and bullion			$150,000,000.00
Trust funds:			
Gold coin and bullion		$1,088,947,169.00	
Silver dollars		483,550,000.00	
Silver dollars of 1890		2,660,000.00	
			1,573,157,169.00
General fund:			
In Treasury offices—			
Gold coin	$25,413,866.87		
Gold certificates	82,949,460.00		
Standard silver dollars	9,936,070.00		
Silver certificates	14,421,408.00		
United States notes	9,465,336.00		
Treasury notes of 1890	3,330.00		
National-bank notes	15,311,542.47		
Certified checks on banks	343,190.58		
		157,844,703.92	
Deduct current liabilities—			
National-bank 5 per cent fund	$28,092,127.73		
Less notes in process of redemption	28,092,127.73		
Outstanding warrants and checks	34,118,314.81		
Balances to credit of disbursing officers	90,590,674.36		
Post Office Department balances	6,452,334.59		
Miscellaneous items	10,618,605.32		
Postal savings—5 per cent account	2,540,446.92		
	144,320,376.00		
Less warrants and checks not cleared	57,528,598.04		
		86,791,777.96	
Working balance in Treasury offices			71,052,925.96
In national-bank depositories—			
To credit of the Treasurer of the United States	$69,746,133.15		
To credit of disbursing officers	6,517,481.91		
		76,263,615.06	

General fund—Continued.			
In treasury of the Philippine Islands—			
To credit of the Treasurer of the United States	$1,061,897.26		
To credit of United States disbursing officers	2,910,482.71		
		$3,972,379.97	
		80,235,995.03	
Deduct current liabilities—			
Outstanding warrants	710,674.15		
Balances to the credit of disbursing officers	9,427,964.62		
		10,138,638.77	
Balances in banks and in treasury of Philippine Islands			$70,097,356.26
In Treasury offices—			
Silver bullion (at cost)		$2,064,332.43	
Subsidiary silver coin		20,737,926.12	
Fractional currency		276.87	
Minor coin		1,997,166.63	
Awaiting reimbursement, United States bonds and interest paid		11,000.52	
			24,810,702.57
Total balance in general fund June 30, 1913			165,960,984.79
Total balance in general fund June 30, 1912			167,152,478.99
Decrease in 1913			1,191,494.20

Comparison of receipts, fiscal years 1912 and 1913.

	1913.	1912.	Increase, 1913.	Decrease, 1913.
Customs	$318,891,395.86	$311,321,672.22	$7,569,723.64	
Internal revenue:				
Ordinary	309,410,665.81	293,028,895.93	16,381,769.88	
Corporation tax	35,006,299.84	28,583,303.73	6,422,996.11	
Sales of public lands	2,910,204.69	5,392,796.75		$2,482,592.06
Consular fees	1,798,038.57	1,700,876.45	97,162.12	
Chinese indemnity	644,500.26	105,081.41	539,418.85	
Profits on coinage, bullion deposits, etc	5,545,148.05	6,970,159.43		1,425,011.38
Payment of interest by Pacific railways	9,493.19	8,046.95	1,446.24	
Tax on circulation of national banks	3,730,059.08	3,637,008.78	93,050.30	
Interest on public deposits	34,609.91	40,675.01		6,065.10
Night services, customs service	229,971.40	234,084.84		4,113.44
Customs fees, fines, penalties, etc	1,588,201.84	1,387,114.94	201,086.90	
Navy hospital and clothing funds, fines and forfeitures, etc	1,026,118.12	1,326,013.43		299,895.31
Sales of ordnance material, etc	202,432.25	224,732.28		22,300.03
Land fees	1,643,041.08	1,252,550.97	390,490.11	
Fees on letters patent	2,077,101.69	2,076,399.85	701.84	
Compromise and repurchase of forfeited lands	648,582.95		648,582.95	
Depredations on public lands	103,600.40	161,070.71		57,470.31
Proceeds of town sites, Reclamation Service	17,784.74	15,224.10	2,560.64	
Forest reserve fund	2,466,927.23	2,158,344.99	308,582.24	
Immigrant fund	4,735,062.00	3,336,519.33	1,398,542.67	
Naturalization fees	390,425.50	244,442.25	145,983.25	
Proceeds of sealskins	130,640.57	385,862.28		255,221.71
Alaska fund	205,907.28	225,639.43		19,732.15
Judicial fees, fines, penalties, etc	1,123,949.87	1,274,839.66		150,889.79

Comparison of receipts, fiscal years 1912 and 1913—Continued.

	1913.	1912.	Increase, 1913	Decrease, 1913.
Sales of Government property	$3,480,618.06	$2,782,028.47	$698,589.59	
Rent of public buildings, grounds, etc	268,301.09	204,342.59	63,958.50	
Sales of lands and buildings	72,795.79	33,201.30	39,594.49	
District of Columbia, general receipts	8,070,369.29	7,774,381.09	295,988.20	
Funds contributed for river and harbor improvements	1,020,520.00	652,000.00	368,520.00	
Panama Canal, rentals, work done, etc	1,693,147.47	1,251,610.00	441,537.47	
Reimbursements on account of expenditures made for Indian tribes	531,915.82	829,925.88		$298,010.06
Miscellaneous	2,160,039.75	1,904,513.89	255,525.86	
TRUST FUNDS.				
Library of Congress:				
Trust fund bequest	20,000.00		20,000.00	
Department of State:				
Miscellaneous trust funds	181,047.36	1,149,880.22		968,832.86
War Department:				
Army deposit fund	1,589,835.51	1,869,401.54		279,566.03
Soldiers' Home permanent fund	504,289.93	446,597.88	57,692.05	
Miscellaneous trust funds	4,518.19		4,518.19	
Navy Department:				
Navy deposit fund	284,608.56	457,003.92		172,395.36
Marine Corps deposit fund	159,880.80	148,922.20	10,958.60	
Interior Department:				
Deposits for surveying public lands	67,774.26	71,606.98		3,832.72
Proceeds of Indian lands	3,739,104.72	3,264,763.79	474,340.93	
Indian moneys, proceeds of labor	4,489,248.60	3,079,440.57	1,409,808.03	
Miscellaneous trust funds	156,199.22	59,687.02	96,512.20	
Personal funds of patients, Government Hospital for Insane	23,864.84	31,588.13		7,723.29
Pension money, Government Hospital for Insane	97,396.46	91,107.07	6,289.39	
District of Columbia:				
Miscellaneous trust fund deposits	510,120.53	448,381.62	61,738.91	
Washington redemption fund	117,769.02	110,383.43	7,385.59	
Police and firemen's relief funds	109,703.38	99,291.39	10,411.99	
Other trust funds	19,618.47	51,253.18		31,634.71
Total	723,942,849.30	691,902,667.88	38,525,467.73	6,485,286.31
Deduct—				
Moneys covered by warrant in year subsequent to the deposit thereof	337,590.05	461,792.56		124,202.51
	723,605,259.25	691,440,875.32	38,525,467.73	6,361,083.80
Add—				
Moneys received in fiscal year but not covered by warrant	505,970.59	337,590.05	168,380.54	
Ordinary receipts	724,111,229.84	691,778,465.37	38,693,848.27	6,361,083.80
Public debt:				
Proceeds of bonds, Panama Canal		32,358,366.00		32,358,366.00
Premium on sale of bonds		830,738.15		830,738.15
Panama Canal bond receipts		33,189,104.15		33,189,104.15
Postal savings bonds	1,929,840.00	459,280.00	1,470,560.00	
National-bank note fund	21,471,010.00	20,078,365.00	1,392,645.00	
Public debt receipts	23,400,850.00	53,726,749.15	2,863,205.00	33,189,104.15
Total receipts, exclusive of postal	747,512,079.84	745,505,214.52	41,557,053.27	39,550,187.95
Postal revenues	266,619,525.65	246,744,015.88	19,875,509.77	
Total receipts, including postal	1,014,131,605.49	992,249,230.40	61,432,563.04	39,550,187.95

Comparison of disbursements, fiscal years 1912 and 1913.

	1913.	1912.	Increase, 1913.	Decrease, 1913.
CIVIL ESTABLISHMENT.				
Legislative:				
Senate	$1,934,416.04	$1,847,946.28	$86,469.76	
House of Representatives	5,148,038.19	4,740,722.59	407,315.60	
Legislative, miscellaneous	175,557.23	48,480.89	127,076.34	
National Monetary Commission		47,102.26		$47,102.26
Public Printer	5,444,754.11	5,423,583.19	21,170.92	
Library of Congress	559,255.78	593,282.38		34,026.60
Botanic Garden	29,792.17	28,832.02	960.15	
Total legislative	13,291,813.52	12,729,949.61	642,992.77	81,128.86
Executive proper:				
Salaries and expenses	214,012.15	236,871.39		22,859.24
Administration of the customs laws	10,438.81	280,128.92		269,690.11
Inquiries for change of methods of transacting public business	78,083.62	126,685.25		48,601.63
Civil Service Commission	289,480.15	280,293.01	9,187.14	
Total executive proper	592,014.73	923,978.57	9,187.14	341,150.98
Department of State:				
Salaries and expenses	343,226.33	362,076.12		18,849.79
Foreign intercourse—				
Diplomatic salaries	733,409.76	804,591.06		71,181.30
Consular salaries	1,427,968.89	1,528,666.97		100,698.08
Contingent expenses of foreign missions	329,769.71	301,787.50	27,982.21	
Contingencies of consulates	453,572.23	455,155.75		1,583.52
Emergencies arising in the Diplomatic and Consular Service	47,736.41	5,752.40	41,984.01	
Miscellaneous items	585,649.16	652,328.27		66,679.11
Trust funds	1,057,047.60	401,116.59	655,931.01	
Total Department of State	4,978,380.09	4,511,474.66	725,897.23	258,991.80
Treasury Department:				
Salaries Secretary's office and divisions thereof	617,923.39	599,080.49	18,842.90	
Contingent fund for Secretary	14,794.96	5,560.89	9,234.07	
Contingent expenses of department	245,605.34	238,620.06	6,985.28	
Customs Service—				
Collecting customs revenue	10,924,669.88	10,234,894.82	689,775.06	
Detection and prevention of frauds	160,422.98	164,347.15		3,924.17
Refunding excess of deposits	3,957,897.95	4,863,886.80		905,988.85
Debentures or drawbacks	4,653,388.39	4,681,994.84		28,606.45
Compensation in lieu of moieties	49,975.69	100,422.92		50,447.23
Miscellaneous refunds	56,934.81	16,615.74	40,319.07	
Internal-Revenue Service—				
Expenses of collecting	5,514,201.00	5,398,947.23	115,253.77	
Refunds and reliefs	885,817.21	605,714.50	280,102.71	
Suppressing counterfeiting and other crimes	134,044.88	137,009.11		2,964.23
Accounting offices	1,696,951.67	1,686,212.36	10,739.31	
Miscellaneous offices	1,062,435.28	1,052,988.02	9,447.26	
Public Health Service	1,984,608.91	1,768,706.00	215,902.91	
Epidemic diseases	245,636.54	308,829.75		63,193.21
Engraving and Printing	3,538,146.11	3,595,865.06		57,718.95
Paper, etc., for United States securities	420,738.85	425,068.19		4,329.34
Revenue-Cutter Service	2,328,706.80	2,318,630.08	10,076.72	
Revenue vessels	211,063.88	628,628.86		417,564.98
Life-Saving Service	2,344,609.83	2,398,619.67		54,009.84
Independent Treasury	566,743.09	678,938.93		112,195.84
Mints and assay offices	1,067,509.26	821,615.48	245,893.78	
Public buildings—				
Sites, construction, and equipment	14,021,781.21	18,034,385.07		4,012,603.86
Current maintenance	4,704,202.99	4,802,747.07		98,544.08
Miscellaneous items	167,076.50	9,697.57	157,378.93	
Special funds—				
Philippine special funds	308,986.22	125,308.71	183,677.51	
Night services, Customs Service	229,075.98	238,687.97		9,611.99
Total Treasury Department	62,113,949.60	65,942,023.34	1,993,629.28	5,821,703.02
War Department:				
Salaries and expenses	1,857,794.17	1,923,988.94		66,194.77
Public buildings and grounds	362,666.07	329,484.81	33,181.26	
Total War Department	2,220,460.24	2,253,473.75	33,181.26	66,194.77
Navy Department:				
Salaries and expenses	829,554.96	797,704.03	31,850.93	

Comparison of disbursements, fiscal years 1912 and 1913—Continued.

	1913.	1912.	Increase, 1913.	Decrease, 1913.
Interior Department:				
Salaries and expenses, office of Secretary	$680,051.37	$690,304.47		$10,253.10
General Land Office	678,321.93	661,395.72	$16,926.21	
Public lands service	2,700,073.99	2,729,591.31		29,517.32
Indian Office	226,033.99	225,821.32	212.67	
Pension Office	1,986,349.75	1,754,329.26	232,020.49	
Patent Office	1,452,151.62	1,458,800.39		6,648.77
Bureau of Education	289,306.12	283,841.59	5,464.53	
Colleges for agriculture and the mechanic arts	2,500,000.00	2,500,000.00		
Geological Survey	1,268,782.60	1,266,147.12	2,635.48	
Bureau of Mines	564,986.56	506,547.21	58,439.35	
Office of Superintendent of Capitol Building and Grounds	587,573.08	436,069.62	151,503.46	
National parks	165,388.40	170,989.25		5,600.85
Beneficiaries	623,921.36	640,886.96		16,965.60
Meridian Hill Park, District of Columbia	51,922.93	439,249.92		387,326.99
Protecting lands and property in the Imperial Valley	50,240.46	169,360.84		119,120.38
Enlarging the Capitol grounds	1,119,156.72		1,119,156.72	
Miscellaneous items	65,932.61	314,006.42		248,073.81
Special funds—				
Reclamation fund	6,607,086.09	8,980,014.45		2,372,928.36
Five, three, and two per cent funds, sales of lands	238,889.77	247,855.76		8,965.99
Revenues of national parks and Hot Springs, Ark.	59,454.18	99,825.37		40,371.19
Public schools, Alaska fund	58,250.74	50,809.19	7,441.55	
Miscellaneous special funds	34,728.72	20.75	34,707.97	
Trust funds—				
Deposits for surveying public lands	161,510.47	207,923.19		46,412.72
Miscellaneous trust funds	213,643.24	202,507.71	11,135.53	
Total Interior Department	22,383,756.70	24,036,297.82	1,639,643.96	3,292,185.08
Post Office Department:				
Salaries and expenses	1,555,422.65	1,597,691.58		42,268.93
Deficiency in postal revenues	1,027,368.79	1,568,194.88		540,826.09
Establishing postal savings depositories	230,305.23	287,553.80		57,248.57
Parcel post equipment	370,217.26		370,217.26	
Miscellaneous items	13,395.83	7,791.62	5,604.21	
Total Post Office Department	3,196,709.76	3,461,231.88	375,821.47	640,343.59
Department of Agriculture:				
Salaries and miscellaneous	5,972,891.65	6,437,372.31		464,480.66
Expenses, Animal Industry	1,283,929.54	1,271,413.07	12,516.47	
Meat inspection, Animal Industry	2,933,855.04	3,003,165.17		69,310.13
Expenses of Plant Industry and cotton boll weevil investigation	1,617,185.43	1,382,915.04	234,270.39	
Purchase of seeds	286,549.94	295,184.94		8,635.00
Forest Service	2,998,875.59	2,763,402.35	235,473.24	
Acquisition of lands for protection of watersheds, navigable streams	897,245.99	111,518.70	785,727.29	
Enforcement food and drugs act	536,518.57	517,336.69	19,181.88	
Agricultural experiment stations	1,598,565.32	1,588,434.24	10,131.08	
Weather Bureau	1,636,466.27	1,608,347.30	28,118.97	
Special funds—				
Payments to States and Territories from National Forests fund	506,603.58	482,376.18	24,227.40	
Roads and trails for States	153,524.49		153,524.49	
Miscellaneous special funds	46,816.29	10,101.43	36,714.86	
Total Department of Agriculture	20,469,027.70	19,471,567.42	1,539,886.07	542,425.79
Department of Commerce:				
Salaries and expenses	846,963.91	782,942.31	64,021.60	
Bureau of Standards	622,048.15	553,708.30	68,339.85	
Census Office	1,334,295.25	2,274,531.29		940,236.04
Coast and Geodetic Survey	1,003,523.23	959,241.17	44,282.06	
Lighthouse Establishment	5,472,158.71	4,956,516.21	515,642.50	
Bureau of Fisheries	1,399,439.41	839,483.94	559,955.47	
Fish hatcheries	45,006.32	65,472.57		20,466.25
Steamboat-Inspection Service	527,980.89	520,619.18	7,361.71	
Miscellaneous items	12,041.21	5,732.72	6,308.49	
Total Department of Commerce	11,263,457.08	10,958,247.69	1,265,911.68	960,702.29

Comparison of disbursements, fiscal years 1912 and 1913—Continued.

	1913.	1912.	Increase, 1913.	Decrease, 1913.
Department of Labor:				
Salaries and expenses	$35,651.21		$35,651.21	
Bureau of Labor Statistics	164,154.16	$185,223.01		$21,068.85
Bureau of Immigration and Naturalization	344,084.92	306,661.67	37,423.25	
Regulating immigration	2,455,387.72	2,649,651.66		194,263.94
Immigration stations	251,943.98	95,910.18	156,033.80	
Special fund, immigration stations	96,158.12	271,304.10		175,145.98
Total Department of Labor	[1] 3,347,380.11	3,508,750.62	229,108.26	390,478.77
Department of Justice:				
Salaries and expenses	1,523,067.65	1,388,562.50	134,505.15	
Salaries of justices, assistant attorneys, etc.	1,619,479.79	1,539,505.25	79,974.54	
Court of Claims	103,623.23	68,030.63	35,592.60	
Salaries, fees, etc., of marshals	1,595,184.91	1,380,893.34	214,291.57	
Fees of witnesses	1,210,449.98	1,056,845.46	153,604.52	
Salaries and fees, district attorneys	631,925.00	547,588.12	84,336.88	
Fees of jurors	1,048,104.23	1,028,639.60	19,464.63	
Fees of clerks	243,529.45	334,361.27		90,831.82
Fees of commissioners	116,972.04	117,938.64		966.60
Support of prisoners	521,087.84	522,941.58		1,853.74
Pay of bailiffs	275,733.93	237,134.96	38,598.97	
Miscellaneous expenses, United States courts	580,055.80	500,083.93	79,971.87	
Miscellaneous items	954,418.34	994,474.48		40,056.14
Total Department of Justice	10,423,632.19	9,716,999.76	840,340.73	133,708.30
Independent bureaus and offices:				
Interstate Commerce Commission	1,644,299.39	1,388,203.60	256,095.79	
Smithsonian Institution	152,403.56	152,940.37		536.81
National Museum	418,955.87	561,695.31		142,739.44
Zoological Park	105,338.13	102,966.62	2,371.51	
Territorial governments	217,433.30	183,032.41	34,400.89	
State, War, and Navy Department Building	160,865.91	164,909.37		4,043.46
Commissions	179,029.79		179,029.79	
Total independent bureaus and offices	2,878,325.95	2,553,747.68	471,897.98	147,319.71
District of Columbia:				
Salaries and expenses	11,249,763.13	11,610,777.41		361,014.28
Special funds—				
Water department	836,348.25	662,707.64	173,640.61	
Miscellaneous special funds	8,279.42	10,098.68		1,819.26
Trust funds—				
Miscellaneous trust-fund deposits	505,758.16	410,145.24	95,612.92	
Washington redemption fund	116,694.95	113,300.00	3,394.95	
Police and firemen's relief funds	105,472.26	100,276.76	5,195.50	
Other trust funds	18,894.62	52,236.73		33,342.11
Total District of Columbia	12,841,210.79	12,959,542.46	277,843.98	396,175.65
Total Civil Establishment	170,829,[illegible]73.42	173,824,989.29	10,077,192.74	13,072,508.61
MILITARY ESTABLISHMENT.				
Quartermaster Corps	29,725,187.39	28,927,678.89	797,508.50	
Pay, etc., of the Army	48,559,871.71	44,539,312.67	4,020,559.04	
Subsistence of the Army	10,193,025.64	8,501,166.01	1,691,859.63	
National cemeteries	258,498.68	264,762.33		6,263.65
Medical Department	868,099.11	960,069.71		91,970.60
Ordnance Department	6,500,645.77	6,023,446.76	477,199.01	
Engineer Department	2,074,046.38	4,034,635.53		1,960,589.15
Signal Service	756,214.64	600,686.23	155,528.41	
Military Academy	1,261,078.96	1,209,956.81	51,122.15	
Improving harbors	9,923,121.43	9,974,318.40		51,196.97
Improving rivers	31,539,430.41	25,573,299.17	5,966,131.24	
Military posts	2,469,855.80	2,852,014.61		382,158.81
National homes for disabled soldiers	3,837,932.65	3,878,816.92		40,884.27
State homes for disabled soldiers	1,549,771.16	1,152,432.32	397,338.84	
Militia	5,944,466.68	4,720,167.04	1,224,299.64	
Raising the U. S. S. Maine	72,139.48	282,232.12		210,092.64
Sufferers from floods, Mississippi and Ohio Valleys	169,797.29	881,638.08		711,840.79
Soldiers' Home interest account	98,780.49	100,455.79		1,675.30

[1] Includes all expenditures made during the fiscal year 1913 for bureaus and offices transferred to the Department of Labor, which was created March 4, 1913.

Comparison of disbursements, fiscal years 1912 and 1913—Continued.

	1913.	1912.	Increase, 1913.	Decrease, 1913.
Monuments	$78,528.55	$166,887.58		$88,359.03
War claims and relief acts	645,846.79	391,774.27	$254,072.52	
Miscellaneous items	946,635.56	875,372.94	71,262.62	
Special funds:				
Wagon roads, etc., Alaska fund	227,932.05	152,061.77	75,870.28	
Ordnance material, powder, etc	61,616.40	139,778.03		78,161.63
For rivers and harbors	807,770.00	97,000.00	710,770.00	
Miscellaneous special funds	137,158.89		137,158.89	
Trust funds:				
Pay of the Army, deposit fund	1,189,163.52	1,848,012.94		658,849.42
Soldiers' Home permanent fund	486,319.23	647,400.00		161,080.77
Miscellaneous trust funds	4,518.19	45.00	4,473.19	
Total Military Establishment	160,387,452.85	148,795,421.92	16,035,153.96	4,443,123.03
NAVAL ESTABLISHMENT.				
Increase of the Navy	29,436,786.37	29,803,245.74		366,459.37
Bureau of Yards and Docks	6,002,676.39	8,479,179.80		2,476,503.41
Bureau of Equipment	8,075,366.28	8,619,441.00		544,074.72
Bureau of Navigation	2,964,348.85	3,218,959.31		254,610.46
Bureau of Construction and Repair	7,702,238.98	8,506,224.25		803,985.27
Bureau of Ordnance	14,856,414.42	12,938,629.91	1,917,784.51	
Bureau of Steam Engineering	5,477,048.18	6,010,212.19		533,164.01
Bureau of Supplies and Accounts	9,972,017.46	7,894,616.51	2,077,400.95	
Bureau of Medicine and Surgery	536,406.99	460,285.04	76,121.95	
Marine Corps	6,953,293.21	7,328,800.92		375,507.71
Naval Academy	704,016.39	687,509.52	16,506.87	
Pay of the Navy	37,992,814.90	37,373,323.49	619,491.41	
Judgments Court of Claims and United States courts	198,381.77		198,381.77	
General account of advances	130,376.10	2,294,316.37		2,163,940.27
Miscellaneous items	69,148.52	10,632.45	58,516.07	
Special funds—				
Naval hospital fund	293,637.95	387,273.63		93,635.68
Ordnance material (proceeds of sales)	146,977.80	75,407.42	71,570.38	
Fines and forfeitures	621,972.79	959,014.75		337,041.96
Clothing fund	477,720.85		477,720.85	
Trust funds—				
Pay, Marine Corps, deposit fund	197,891.53	72,942.00	124,949.53	
Pay of the Navy, deposit fund	452,362.70	470,617.73		18,255.03
Prize money	963.54	1,323.69		360.15
Total Naval Establishment	133,262,861.97	135,591,955.72	5,638,444.29	7,967,538.04
INDIAN SERVICE.				
Current and contingent expenses	1,102,545.05	984,370.87	118,174.18	
Fulfilling treaty stipulations	669,219.50	708,780.21		39,560.71
Miscellaneous supports	614,923.10	599,820.36	15,102.74	
Interest on Indian trust-fund accounts	2,357,071.92	1,726,047.38	631,024.54	
Support of Indian schools	3,960,186.99	3,369,303.71	590,883.28	
Miscellaneous expenses	2,846,003.27	3,387,638.34		541,635.07
Trust funds	8,756,209.07	9,358,878.93		602,669.86
Total Indian Service	20,306,158.90	20,134,839.80	1,355,184.74	1,183,865.64
Pensions	175,085,450.29	153,590,456.26	21,494,994.03	
Interest on the public debt	22,899,108.08	22,616,300.48	282,807.60	
Ordinary disbursements[1]	682,770,705.51	654,553,963.47	54,883,777.36	26,667,035.32
Panama Canal disbursements	41,741,258.03	35,327,370.66	6,413,887.37	
Public debt:				
National-bank note fund	24,089,035.50	28,527,711.50		4,438,676.00
Funded loan of 1907	99,950.00	116,350.00		16,400.00
Miscellaneous redemptions	2,625.00	4,266.03		1,641.03
Public debt disbursements	24,191,610.50	28,648,327.53		4,456,717.03
Total disbursements, exclusive of postal	748,703,574.04	718,529,661.63	61,297,664.73	31,123,752.35
Postal service, payable from postal revenues[2]	262,108,874.74	246,744,015.88	15,364,858.86	
Total disbursements, including postal	1,010,812,448.78	965,273,677.54	76,662,523.59	31,123,752.35

[1] Exclusive of Panama Canal, public debt, and postal service disbursements.
[2] Exclusive of grants from the Treasury for deficiencies in postal revenues included in expenses of civil establishment, p. 21

ESTIMATES.

The ordinary receipts for the fiscal year 1914 are estimated at $736,000,000 and the ordinary disbursements at $701,900,000, showing an estimated surplus of ordinary receipts over ordinary disbursements of $34,100,000 for the year ending June 30, 1914. Payments which may be made for the Panama Canal during the year from the general fund, in the estimated sum of $41,000,000, would, however, absorb the excess of ordinary receipts and show an excess of disbursements of $6,900,000.

With a new tariff and income tax law in operation under the act of Congress approved October 3, 1913, it is evident that the annual revenues to be received under its provisions can not be approximated for the fiscal year ending June 30, 1915, as closely as would be the case if comparisons could be made with the operations of this law for three-quarters of a preceding year. However, it is estimated that, for the fiscal year 1915, the ordinary receipts of the Government will be $728,000,000.

The estimates for the ordinary and extraordinary appropriations for 1915 payable from the general fund of the Treasury, as submitted by the several executive departments and offices, are $714,684,675.02, which would indicate on the basis of estimated receipts an excess of ordinary receipts over ordinary expenditures of $13,315,324.98, but as the appropriations for public works can not be expended in full during the year, it is estimated that the charge upon the general fund for 1915 for ordinary purposes will not exceed $702,000,000, and that the ordinary receipts will therefore probably exceed the ordinary expenditures by the sum of $26,000,000.

The estimated expenditures for the Panama Canal to be paid from the general fund without sales of bonds are estimated at $26,326,985, and the excess of ordinary receipts should therefore practically meet the payments which may be made for the canal under the appropriations as submitted for the year 1915.

Detailed estimates for the fiscal years 1914 and 1915 follow:

Fiscal year 1914.

The ordinary receipts of the Government for the current fiscal year are estimated upon the basis of existing laws as follows:

From customs		$270,000,000
From internal revenue:		
Ordinary	$312,000,000	
Corporation excise tax	8,000,000	
Income tax—		
Corporations	33,000,000	
Individuals	54,000,000	
		407,000,000

From sales of public lands	$3,000,000
From miscellaneous sources	56,000,000
Total estimated ordinary receipts	736,000,000

The disbursements for the same period are estimated as follows:

For the civil establishment	$177,000,000	
For the War Department	170,000,000	
For the Navy Department	136,000,000	
For the Indian Service	21,000,000	
For pensions	175,000,000	
For interest on the public debt	22,900,000	
Total estimated ordinary disbursements		701,900,000
Estimated surplus of ordinary receipts		34,100,000
For Panama Canal: Estimated disbursements to be made from the general fund of the Treasury during the year without sales of bonds		41,000,000
An excess of disbursements, including the Panama Canal, of		6,900,000

Public debt: Redemptions of the public debt, including transactions in deposits and redemptions for the national-bank note redemption account under the act of July 14, 1890, which, for the year ended June 30, 1913, aggregated the net sum of $2,720,600, are excluded from the estimates, as payments on these accounts will probably be approximately offset by receipts from postal savings bonds.

POSTAL SERVICE.

The Post Office Department estimates the probable expenditures for the postal service for the fiscal year 1914 at approximately $285,500,000, and believes that if the business conditions of the country continue normal the postal revenues will probably equal the expenditures.

Fiscal year 1915.

It is estimated that upon the basis of existing laws the ordinary receipts for the fiscal year 1915 will be:

From customs		$249,000,00
From internal revenue:		
Ordinary	$315,000,000	
Income tax—		
Corporations	40,000,000	
Individuals	65,000,000	
		420,000,000
From sales of public lands		3,000,000
From miscellaneous sources		56,000,000
Total estimated ordinary receipts		728,000,000

The estimates of appropriations for the fiscal year 1915, as submitted by the executive departments and offices, are as follows:

Legislative establishment		$7,533,331.50
Executive establishment:		
Executive proper	$599,980.00	
Department of State	354,060.00	
Treasury Department	12,597,497.00	
War Department	1,944,718.00	
State, War, and Navy Department Building, expenses	285,020.00	
Navy Department	862,390.00	
Department of Interior	5,761,765.00	
Post Office Department	1,850,000.00	
Department of Agriculture	19,061,332.00	
Department of Commerce	4,943,810.00	
Department of Labor	790,010.00	
Department of Justice	612,880.00	
Territorial governments	207,138.20	
		49,870,600.20
Judicial establishment		1,242,110.00
Foreign intercourse		4,447,042.66
Military Establishment		105,937,544.26
Naval Establishment, including increase of the Navy for new and prior Navy building programs, $19,262,000 and $19,073,234, respectively		139,831,953.53
Indian Affairs		10,208,865.06
Pensions		169,150,000.00
Public works:		
Legislative	$607,000.00	
Treasury Department, public buildings and works	8,431,343.94	
War Department, exclusive of rivers and harbors	13,044,173.59	
Rivers and harbors	41,483,895.00	
Panama Canal	26,326,985.00	
Navy Department	4,585,500.00	
Department of Interior	495,995.00	
Department of Commerce	1,910,500.00	
Department of Labor	812,200.00	
Department of Justice	220,000.00	
		97,917,592.53
Postal service payable from postal revenues		306,953,117.00
Miscellaneous:		
Legislative	$6,340,682.96	
Executive	32,500.00	
Treasury Department	28,472,206.00	
War Department	6,160,718.81	
Department of Interior	5,789,213.32	
Department of Commerce	8,461,960.00	
Department of Labor	3,161,280.20	
Department of Justice	8,666,187.50	
District of Columbia	14,491,614.49	
Smithsonian Institution and National Museum	821,850.00	
Interstate Commerce Commission	1,695,000.00	
Board of Mediation and Conciliation	50,000.00	
Commission on Industrial Relations	250,000.00	
		84,393,213.28

Permanent annual appropriations:		
Interest on the public debt	$22,900,000.00	
Refunds—		
Customs and internal revenue	$9,036,000.00	
Other refunds	10,834,900.00	
	19,870,900.00	
Reclamation fund	9,000,000.00	
Sinking fund	60,717,000.00	
Miscellaneous	18,708,507.00	
		$131,196,407.00
Total estimated appropriations for 1915		1,108,681,777.02
Deduct:		
Postal service payable from postal revenues, $306,953,117; sinking fund, $60,717,000; Panama Canal, $26,326,985; an aggregate of		393,997,102.00
Total estimates for ordinary appropriations for 1915		714,684,675.02
Add estimates for Panama Canal appropriations		26,326,985.00
Total estimated appropriations for 1915 to become a charge on the general fund without bond sales for the Panama Canal		741,011,660.02
Estimated ordinary receipts for 1915		728,000,000.00
Estimated ordinary expenditures for the year (see page 24)		702,000,000.00
Estimated excess of ordinary receipts (which excess of receipts should meet payments for the Panama Canal appropriations as submitted for the year 1915)		26,000,000.00

POSTAL SERVICE.

The Post Office Department estimates the probable expenditures for the postal service for the year 1915 at approximately $307,000,000, and believes that if the business conditions of the country continue normal the postal revenues will probably equal the expenditures.

ESTIMATES FOR 1915 AND APPROPRIATIONS FOR 1914.

Comparison of the estimates for 1915, with the appropriations for 1914, shows an increase in the 1915 estimates of $12,842,061.29, including the Panama Canal, as exhibited in the tables following:

Statement of estimates of appropriations for 1915, increased over appropriations for 1914.

[Excluding sinking fund, and postal service payable from the postal revenues.]

Departments, etc.	1915 estimates, including permanent annual.	1914 appropriations, including permanent annual.	Increase in 1915 estimates over 1914 appropriations.	Decrease in 1915 estimates under 1914 appropriations.
Legislative	$14,481,814.46	$13,474,489.50	$1,007,324.96	
Executive	632,480.00	577,170.00	55,310.00	
Department of State	4,972,102.66	4,567,322.66	404,780.00	
Treasury Department:				
Treasury Department, exclusive of public buildings	50,395,703.00	49,702,876.40	692,826.60	
Public buildings	8,066,343.94	14,552,500.00		$6,486,156.06
New revenue cutters	365,000.00		365,000.00	
War Department:				
War Department, exclusive of rivers and harbors	133,730,154.66	117,172,430.44	16,557,724.22	
Rivers and harbors	44,158,495.00	53,631,239.00		9,472,744.00
Navy Department:				
Navy Department, exclusive of building program	108,826,086.53	108,164,423.53	661,663.00	
Navy building program, new	19,262,000.00	35,325,695.00	3,009,539.00	
Navy building program, prior years	19,073,234.00			
Department of the Interior:				
Department of the Interior, exclusive of pensions and Indians	24,414,473.32	25,138,351.51		723,878.19
Pensions	169,150,000.00	180,300,000.00		11,150,000.00
Indians	17,608,865.06	15,401,819.67	2,207,045.39	
Post Office Department, exclusive of postal service	1,850,000.00	1,917,565.04		67,565.04
Department of Agriculture	25,060,532.00	23,959,824.37	1,100,707.63	
Department of Commerce	15,319,270.00	11,093,813.00	4,225,457.00	
Department of Labor	4,763,490.20	3,443,290.00	1,320,200.20	
Department of Justice	10,888,677.50	10,287,226.00	601,451.50	
Territorial governments	260,138.20	220,410.00	39,728.20	
Independent offices	3,159,500.00	3,012,215.12	147,284.88	
District of Columbia	15,346,314.49	12,220,113.11	3,126,201.38	
	691,784,675.02	684,162,774.35	35,522,243.96	27,900,343.29
Interest on the public debt	22,900,000.00	22,860,000.00	40,000.00	
Ordinary	714,684,675.02	707,022,774.35	35,562,243.96	27,900,343.29
Net increase in ordinary			7,661,900.67	
Panama Canal	26,326,985.00	21,146,824.38	5,180,160.62	
Total	741,011,660.02	728,169,598.73	40,742,404.58	27,900,343.29
Total net increase			12,842,061.29	

Exhibit of appropriations for 1914.

Appropriations made for the fiscal year 1914 and for prior years during the third session Sixty-second Congress, including those made in the sundry civil and Indian acts of the first session Sixty-third Congress, and estimated permanent and indefinite appropriations, and appropriations for the postal service payable from postal revenues		$1,098,602,065.64
Deduct decrease in permanent appropriations for 1914 by current revised estimates therefor		86,770.63
		1,098,515,295.01
Additional appropriations for 1914 and for prior years made by first session Sixth-third Congress		6,327,850.09
Total appropriations for 1914 and for prior years		1,104,843,145.10
Deduct—		
From appropriations of third session Sixty-second Congress:		
Postal service for 1914 payable from the postal revenues	$285,376,271.00	
Postal deficiencies of prior years payable from postal revenues	942,854.26	
Deficiencies for prior years	27,080,512.29	
Sinking fund	60,695,000.00	
	374,094,637.55	
From appropriations of first session Sixty-third Congress:		
Deficiencies for prior years	$2,513,908.82	
Postal deficiencies payable from postal revenues	65,000.00	
	2,578,908.82	
		376,673,546.37
Total appropriations for 1914, exclusive of sinking fund and postal service payable from postal revenues		728,169,598.73

agreeing with the appropriations for 1914 shown in the preceding table, against which the estimates of appropriations submitted for 1915 show an increase of $7,661,900.67 in the ordinary, and $12,842,061.29 including the Panama Canal.

Attention is respectfully called to the two further divisions of this report, to wit, the condensed annual reports of the various bureaus and divisions of the Treasury Department and the tables accompanying the report on the finances.

W. G. McAdoo,
Secretary.

To the Speaker of the House of Representatives.

REPORT OF THE TREASURER OF THE UNITED STATES.

TREASURY DEPARTMENT,
OFFICE OF THE TREASURER,
Washington, November 20, 1913.

SIR: The transactions of the Treasury of the United States for the fiscal year ended June 30, 1913, and its condition at the close of the year are presented in the following report.

The ordinary receipts and disbursements, classified for the past two years, are compared in the subjoined table:

Ordinary receipts and disbursements for the fiscal years 1912 and 1913.

Account.	1912.	1913.	Increase.	Decrease.
RECEIPTS.				
Customs	$311,321,672.22	$318,891,395.86	$7,569,723.64	
Internal revenue:				
Ordinary	293,028,895.93	309,410,665.81	16,381,769.88	
Corporation tax	28,583,303.73	35,006,299.84	6,422,996.11	
Lands	5,392,790.75	2,910,204.69		$2,482,592.06
Miscellaneous	45,092,313.79	48,896,702.41	3,804,388.62	
Receipts of the District of Columbia	8,483,685.46	8,827,580.69	343,895.23	
Total	691,902,667.88	723,942,849.30	34,522,773.48	2,482,592.06
Deduct moneys covered by warrant in year subsequent to the deposit thereof	461,792.56	337,590.05		124,202.51
Total	691,440,875.32	723,605,259.25	34,522,773.48	2,358,389.55
Add moneys received in fiscal year but not covered by warrant	337,590.05	505,970.59	168,380.54	
Net available	691,778,465.37	724,111,229.84	32,332,764.47	
DISBURSEMENTS.				
Legislative	12,729,949.61	13,291,813.52	561,863.91	
Executive	923,978.57	592,014.73		331,963.84
State Department	4,676,384.03	4,978,380.09	301,996.06	
Treasury Department	65,942,023.34	62,113,949.60		3,828,073.74
War Department, civil	2,253,473.75	2,220,460.24		33,013.51
Navy Department, civil	797,704.03	829,554.96	31,850.93	
Interior, civil	24,036,297.82	22,383,756.70		1,652,541.12
Post Office Department proper	1,893,037.00	2,169,340.97	276,303.97	
Postal deficiencies	1,568,194.88	1,027,368.79		540,826.09
Department of Agriculture	19,471,567.42	20,469,027.70	997,460.28	
Department of Commerce and Labor	14,466,998.31	14,610,837.19	143,838.88	
Department of Justice	9,716,999.76	10,423,632.19	706,632.43	
Independent offices	2,388,838.31	2,878,325.95	489,487.64	
District of Columbia	12,959,542.46	12,841,210.79		118,331.67
Total civil and miscellaneous	173,824,989.29	170,829,673.42	3,509,434.10	6,504,749.97
Military Establishment, including rivers and harbors	148,795,421.92	160,387,452.85	11,592,030.93	
Naval Establishment	135,591,955.72	133,262,861.97		2,329,093.75
Indian Service	20,134,839.80	20,306,158.90	171,319.10	
Pensions	153,590,456.26	175,085,450.29	21,494,994.03	
Interest on public debt	22,616,300.48	22,899,108.08	282,807.60	
Total ordinary disbursements	654,553,963.47	682,770,705.51	37,050,585.76	8,833,843.72
Net			28,216,742.04	
Surplus	37,224,501.90	41,340,524.33		

The total ordinary receipts are, at $724,111,229.84, the largest in our history, and this increase occurs by growth in all of the sources except the sale of lands. The net increase was $32,332,764.47.

There was a reduction of expenditures in the civil and miscellaneous of $2,995,315.87, and the Naval Establishment spent $2,329,093.75 less than in the preceding 12 months. Increased expenditures are

recorded by the Military Establishment of $11,592,030.93; in the Indian Service of $171,319.10; interest on the public debt of $282,807.60, and in pensions of $21,494,994.03, which indicates the nation's liberality to its defenders. The net growth of expenditures for the year was $28,216,742.04.

THE PANAMA CANAL.

The excess of income over outgo in the governmental finances during the past fiscal year has maintained an adequate balance in the Treasury for the ordinary operations, as well as the special activities now under way; therefore it was not deemed advisable by the Secretary of the Treasury to offer for sale additional bonds of the Panama Canal loan. The expenses incurred in the construction of that great work during the year, amounting to $41,741,258.03, were paid out of the general fund of the Treasury, and the total net balance so expended to June 30, 1913, reimbursable from the proceeds of bonds not yet sold, is $179,627,617.07.

The proceeds of sales of bonds and the disbursements on account of the canal to the close of the fiscal year 1913 are set forth by years in the table following:

Receipts and disbursements on account of the Panama Canal.

Fiscal years.	Proceeds of United States bonds sold.	Disbursements for Panama Canal.	Excess of—	
			Receipts.	Disbursements.
1904		$50,174,485.00		$50,174,485.00
1905		3,918,819.83		3,918,819.83
1906		19,379,373.71		19,379,373.71
1907	$31,210,817.95	27,198,618.71	$4,012,199.24	
1908	25,367,768.67	38,093,929.04		12,726,160.37
1909	30,731,008.21	31,419,442.41		688,434.20
1910		33,911,673.37		33,911,673.37
1911	18,102,170.04	37,063,515.33		18,961,345.29
1912	33,189,104.15	35,327,370.66		2,138,266.51
	138,600,869.02	276,487,228.06	4,012,199.24	141,898,558.28
1913		41,741,258.03		41,741,258.03
Total	138,600,869.02	318,228,486.09	4,012,199.24	183,639,816.31
Net				179,627,617.07

RECEIPTS AND DISBURSEMENTS ON ACCOUNT OF THE POST OFFICE DEPARTMENT.

The receipts on account of the Post Office Department during the fiscal year were $278,107,699.11, and the disbursements $271,001,697.41. Of these amounts $188,232,180.97, or more than two-thirds, was received and disbursed directly by postmasters without being deposited in the Treasury. Such disbursements are authorized by existing law, and are accounted for under the provisions of section 406 of the Revised Statutes of the United States. Advances were made from the Treasury to meet deficiencies in the postal revenues of $3,027,368.79 during the year, of which $2,000,000 was repaid in the month of January.

The Post Office Department warrants issued by the Postmaster General, which heretofore have been drawn on the assistant treasurers of the United States at Chicago, New York, and San Francisco, by agreement of the Postmaster General were embraced in Department

Circular No. 5, and since February 1, 1913, have been drawn on the Treasurer of the United States; they are payable by any assistant treasurer or regular national-bank depositary of the United States.

A statement of the transactions relating to the account for the service of the Post Office Department with the Treasury during the fiscal year 1913 will be found on page 237.

TRANSACTIONS IN THE PUBLIC DEBT.

Postal-savings bonds, authorized by the act of June 25, 1910, were issued during the fiscal year 1913 to the amount of $1,929,840. The deposits of lawful money of the United States, under the act of July 14, 1890, to retire national-bank notes were $21,471,010, which, with the deposits for the postal-savings bonds, makes a total of $23,400,850 in actual cash received on account of the public debt, while the cash disbursements on account of the principal of matured loans and fractional currency were $102,575 and for national-bank notes canceled and retired $24,089,035.50, a total disbursement for the public debt of $24,191,610.50. The net result was an excess of disbursements of $790,760.50.

The transactions relating to the replacing or retiring of the worn and mutilated paper currency issued under the direct authority of the Government are included in the account of the public debt.

The details for the past two years may be observed in the table following.

Receipts and disbursements on account of the public debt for 1912 and 1913.

Account.	1912	1913	Increase.	Decrease.
RECEIPTS.				
Postal-savings bonds	$459,280.00	$1,929,840.00	$1,470,560.00	
Lawful money deposited to retire national-bank notes	20,078,365.00	21,471,010.00	1,392,645.00	
Total	20,537,645.00	23,400,850.00	2,863,205.00	
Notes and certificates issued:				
United States notes	149,660,000.00	163,000,000.00	13,340,000.00	
Gold certificates	355,760,000.00	468,510,000.00	112,750,000.00	
Silver certificates	411,432,000.00	403,952,000.00		$7,480,000.00
Total	916,852,000.00	1,035,462,000.00	126,090,000.00	7,480,000.00
Panama Canal loan:				
Proceeds of bonds sold—				
Principal	32,358,366.00			32,358,366.00
Premium	830,738.15			830,738.15
Total	33,189,104.15			33,189,104.15
Aggregate	970,578,749.15	1,058,862,850.00	88,284,100.85	
DISBURSEMENTS.				
United States bonds retired	119,380.00	101,030.00		18,350.00
Fractional currency retired	1,236.03	1,545.00	308.97	
National-bank notes retired	28,527,711.50	24,089,035.50		4,438,676.00
Total	28,648,327.53	24,191,610.50	308.97	4,457,026.00
Notes and certificates redeemed:				
United States notes	149,660,000.00	163,000,000.00	13,340,000.00	
Treasury notes	317,000.00	269,000.00		48,000.00
Gold certificates	310,573,300.00	421,840,200.00	111,266,900.00	
Silver certificates	393,382,000.00	401,951,000.00	8,569,000.00	
Total	853,932,300.00	987,060,200.00	133,175,900.00	48,000.00
Aggregate	882,580,627.53	1,011,251,810.50	128,671,182.97	
Excess of receipts	87,998,121.62	47,611,039.50		

In a study of the foregoing table it will be observed that the United States notes issued and credited in the general account as a receipt are offset by an equal amount of worn or unfit notes in kind withdrawn therefrom, canceled, and retired, which is in accordance with the provisions of the act of May 31, 1878. In explanation of the manner of issuing and redeeming gold certificates, silver certificates, and Treasury notes of 1890, it may be said that for certificates issued and credited in the general account an equal amount of the respective kinds of money held in the general account is transferred therefrom to, and retained in, the trust funds for their redemption; for gold certificates, silver certificates, and Treasury notes withdrawn from the general fund, canceled, and retired, a like amount of the respective coins is released from the trust funds and brought into the general fund in their stead.

PUBLIC DEBT, 1912 AND 1913.

At the close of the fiscal year 1913 the outstanding principal of the interest-bearing debt was $965,706,610, an increase of $1,929,840 as compared with that of 1912. The increase was caused by the issue of postal-savings bonds.

The debt bearing no interest amounted to $377,341,134.66, a decrease of $2,720,600.50.

The certificates and notes issued on deposits of coin and bullion (trust funds, act of March 14, 1900) increased $48,401,800, and amounted to $1,572,937,169 at the close of the fiscal year June 30, 1913.

Comparison of the public debt is made, by items, for the fiscal years 1912 and 1913 in the following statement:

Public debt, 1912 and 1913.

	Rate.	When payable.	Outstanding June 30, 1912.	Outstanding June 30, 1913.
Interest-bearing debt:	P. c.			
Consols of 1930	2	After Apr. 1, 1930	$646,250,150.00	$646,250,150.00
Loan of 1908–1918	3	After Aug. 1, 1908	63,945,460.00	63,945,460.00
Loan of 1925	4	Feb. 1, 1925	118,489,900.00	118,489,900.00
Panama Canal loan	2	Aug. 1, 1916	84,631,980.00	84,631,980.00
Do	3	June 1, 1961	50,000,000.00	50,000,000.00
Postal savings bonds	2½	July 1, 1931	459,280.00	2,389,120.00
Total			963,776,770.00	965,706,610.00
Debt bearing no interest:				
Matured loans		On demand	1,760,450.26	1,659,550.26
Old demand notes		do	53,282.50	53,152.50
United States notes		do	346,681,016.00	346,681,016.00
National-bank notes		do	24,710,831.50	22,092,806.00
Fractional currency		do	6,856,154.90	6,854,609.90
Total			380,061,735.16	377,341,134.66
Certificates and notes issued on deposits of coin and bullion (trust funds, act Mar. 14, 1900):				
Gold certificates		On demand	1,040,057,369.00	1,086,727,169.00
Silver certificates		do	481,549,000.00	483,550,000.00
Treasury notes of 1890		do	2,929,000.00	2,660,000.00
Total			1,524,535,369.00	1,572,937,169.00
Aggregate			2,868,373,874.16	2,915,984,913.66

PAYMENT OF INTEREST ON THE REGISTERED BONDS OF THE UNITED STATES.

For interest on registered bonds of the United States, due June 1, 1912, and thereafter, checks have been prepared and mailed from the office of the Secretary of the Treasury. Such checks bear a certificate as to the principal of bonds registered in the name of the payee, over the facsimile signature of the Chief of the Division of Loans and Currency; they also bear the facsimile signature of the Secretary of the Treasury, and are countersigned by a clerk in his office. These checks were embraced in Department Circular No. 5, and since February 1, 1913, have been drawn on the Treasurer of the United States, but are payable by any assistant treasurer or regular national-bank depositary of the United States, and the amount so disbursed is included in the requisition for reimbursement made by the Treasurer at the end of the month. The paid checks are sent to the Register of the Treasury for an administrative examination, who in turn forwards them to the Auditor for the Treasury Department.

RESERVE AND TRUST FUNDS.

The redemptions from the reserve fund during the past fiscal year were, in United States notes, $67,850,957, and in Treasury notes $67,830, making a total of $67,918,787. Under the provisions of the act of March 14, 1900, the redeemed notes were exchanged for gold coin each day, and thereby the reserve was maintained at the fixed amount of $150,000,000. There was no apparent disposition on the part of the holders of United States notes to use them in withdrawing gold coin from the Treasury. The transactions in the reserve fund represent more truly exchanges to secure an accommodation in denominations of currency.

At the close of the fiscal year 1913 the trust funds amounted to $1,572,937,169, of which $887,471,847 was in gold coin, $199,255,322 in gold bullion, and $486,210,000 in standard silver dollars.

There was an increase during the year of $46,669,800 in the gold held against the outstanding gold certificates, and of $1,732,000 in the silver dollars held against outstanding Treasury notes of 1890 and silver certificates.

The transactions in trust-fund obligations during the fiscal year 1913 are recorded in the statement following:

	Outstanding June 30, 1912.	Fiscal year 1913.		Outstanding June 30, 1913.
		Issued.	Redeemed.	
Gold certificates	$1,040,057,369	$468,510,000	$421,840,200	$1,086,727,169
Silver certificates	481,549,000	403,952,000	401,951,000	483,550,000
Treasury notes	2,929,000		269,000	2,660,000
Total	1,524,535,369	872,462,000	824,060,200	1,572,937,169

The foregoing statement does not include $220,000 in gold certificates, series of 1900, that had been issued but not reported in time to be taken up in the public debt statement for June.

STATEMENT OF THE TREASURY OF THE UNITED STATES.

At the close of the fiscal year 1913, from the revised figures of the several funds, the holdings of moneys in the Treasury amounted to $2,014,140,698.25 and was set apart as follows:

RESERVE FUND.

Gold coin and bullion	$150,000,000

TRUST FUNDS.

[Held for the redemption of the notes and certificates for which they are respectively pledged.

Gold:		Gold certificates outstanding	$1,086,947,169
Coin	$885,831,141	Silver certificates outstanding	483,550,000
Bullion	201,116,028	Treasury notes outstanding	2,660,000
	$1,086,947,169		
Silver dollars	483,550,000		
Silver dollars of 1890	2,660,000		
Total	1,573,157,169	Total	1,573,157,169

GENERAL FUND—CASH IN THE VAULTS.

After setting out from the assets of the Treasury the appropriate kinds of money to meet the requirements of the reserve and trust funds, the balances of each kind of money held belong to the general fund of the Treasury, from which, however, must be deducted the current liabilities.

The items composing the general fund are subdivided; the first part shows the amount of each kind of available cash actually held in the vaults of the Treasury offices, the demands against the same, and the working balance in such offices; the second part shows the amounts of public moneys in national banks and other depositaries to the credit of the Treasurer of the United States and of disbursing officers, the demands against the same, and the net balance in such depositaries subject to draft; the third part shows the cash items held in Treasury offices, but which, under provisions of law, are of limited tender or unavailable for payment.

The assets in the general fund in the Treasury on June 30, 1913, and the demand liabilities outstanding on that date were as follows:

In Treasury offices:		
Gold coin	$25,413,866.87	
Gold certificates	82,949,460.00	
Standard silver dollars	9,936,070.00	
Silver certificates	14,421,408.00	
United States notes	9,465,836.00	
Treasury notes of 1890	3,330.00	
National-bank notes	15,311,542.47	
Certified checks on banks	343,190.58	
		$157,844,703.92
Deduct current liabilities:		
National-bank 5 per cent fund	$28,092,127.73	
Less notes in process of redemption	28,092,127.73	
Outstanding warrants and checks		34,118,314.81
Balance to credit of disbursing officers		90,590,674.36

Deduct current liabilities—Contd.			
Post Office Department balance	$6,452,334.59		
Miscellaneous items	10,618,605.32		
Board of trustees, Postal Savings System	2,540,446.92		
	144,320,376.00		
Less warrants and checks not cleared	57,528,598.04		
		$86,791,777.96	
Working balance in Treasury offices			$71,052,925.96
In national-bank depositaries:			
To credit of the Treasurer of the United States	$69,746,133.15		
To credit of disbursing officers	6,517,481.91		
		76,263,615.06	
In treasury of Philippine Islands:			
To credit of the Treasurer of the United States	1,061,897.26		
To credit of United States disbursing officers	2,910,482.71		
		3,972,379.97	
		80,235,995.03	
Deduct current liabilities:			
Outstanding warrants	710,674.15		
Balances to credit of disbursing officers	9,427,964.62		
		10,138,638.77	
Balance in banks and in treasury of Philippine Islands			70,097,356.26
In Treasury offices:			
Silver bullion (at cost)		$2,064,332.43	
Subsidiary silver coin		20,737,926.12	
Fractional currency		276.87	
Minor coin		1,997,166.63	
Awaiting reimbursement: Interest on public debt		11,000.52	
			24,810,702.57
Total balance in general fund June 30, 1913			165,960,984.79
Total balance in general fund June 30, 1912			167,152,478.99
Net decrease			1,191,494.20

AVAILABLE CASH BALANCE.

At the close of the fiscal year 1913 the available cash in the general fund was $165,960,984.79, a decrease of $1,191,494.20 as compared with that of 12 months earlier. This decrease is verified by the following transactions, which include the net results in all accounts of receipts and disbursements shown on previous pages of this report:

Available cash balance June 30, 1912			$167,152,478.99
Add excess of ordinary receipts over disbursements for 1913 (see p. 199)		$41,340,524.33	
Deduct:			
Excess of Panama Canal disbursements over receipts (see p. 200)	$41,741,258.03		
Excess of public debt disbursements over receipts (see p. 201)	790,760.50		
		42,532,018.53	
			1,191,494.20
Available cash balance June 30, 1913			165,960,984.79

The working balance in the vaults of the Treasury at the close of the year was $71,052,925.96.

It will be seen from the foregoing figures that if an emergency should arise calling for an increase of Government deposits in depositary banks the Secretary of the Treasury is in position to give prompt and effective relief to the business situation.

The balance in the Treasury at the end of each month from January, 1907, is stated in Table No. 19, page 261, and for July 1 in each year since 1906 in the subjoined statement:

Available cash balance (including the reserve fund) on the dates named.

Dates.	Available cash balance.		
	Reserve fund.	General fund.	Total.
July 1, 1906	$150,000,000	$180,689,354.82	$330,689,354.82
July 1, 1907	150,000,000	272,061,445.47	422,061,445.47
July 1, 1908	150,000,000	245,171,347.73	395,171,347.73
July 1, 1909	150,000,000	126,375,428.10	276,375,428.10
July 1, 1910	150,000,000	106,894,675.67	256,894,675.67
July 1, 1911	150,000,000	140,176,926.13	290,176,926.13
July 1, 1912	150,000,000	167,152,478.99	317,152,478.99
July 1, 1913	150,000,000	165,960,984.79	315,960,984.79

GOLD IN THE TREASURY.

The gold in the Treasury at the close of the fiscal year 1913 amounted to $1,262,361,035.87, of which $1,011,245,007.87 was in coin.

Under the provisions of the act of March 2, 1911, gold certificates are issued against gold bullion and foreign coin deposited in the Treasury. These certificates differ in no particular from those issued against United States gold coin and are payable in such coin. The intent and effect of the act are not to limit the free coinage of gold. The mints continue to receive all the gold that is offered, and it enters into circulation either in coin or in gold certificates. The effect is simply to allow the Treasury to carry a portion of the reserves in bullion, thus saving cost of coinage.

The amount of new gold coins of current coinage shipped to depositors therefor at the expense of the consignee for transportation charges during the fiscal year was $11,513,233.50. This is one of the annual demands made upon the Treasury and is due principally to the popularity of these coins for Christmas gifts, Easter offerings, birthday presents, and like purposes.

The total amount of gold in the Treasury on July 1 in each year from 1906, set apart for the respective uses, is recorded in the statement following.

Gold in the Treasury.

Dates.	Reserve.	For certificates in circulation.	General fund (belonging to Treasury).	Total.
July 1, 1906	$150,000,000	$516,561,849	$140,489,841.30	$807,051,690.30
July 1, 1907	150,000,000	600,072,299	154,619,431.14	904,691,730.14
July 1, 1908	150,000,000	782,976,619	71,912,063.18	1,004,888,682.18
July 1, 1909	150,000,000	815,005,449	77,698,852.02	1,042,704,301.02
July 1, 1910	150,000,000	802,754,199	92,411,286.24	1,045,165,485.24
July 1, 1911	150,000,000	930,367,929	83,533,254.56	1,163,901,183.56
July 1, 1912	150,000,000	943,435,618	114,028,646.22	1,207,464,264.22
July 1, 1913	150,000,000	1,003,997,709	108,363,326.87	1,262,361,035.87

The gold imported during the fiscal year amounted to $69,194,025, while the exports of the precious metal aggregated $77,762,622, and notwithstanding this drain there was a net increase of $54,896,771.65 in the amount held in the Treasury as compared with that of 12 months earlier.

BONDS HELD AS SECURITY FOR NATIONAL BANKS.

The Treasurer held in trust, at the close of the fiscal year 1913, United States bonds to the amount of $740,529,250 as security for the circulating notes of national banks. The securities pledged for public deposits in the depositary banks amounted to $61,646,300.

The kinds of bonds in the custody of the Treasurer of the United States and the changes therein during the fiscal year 1913 are recorded in the subjoined table:

Bonds held for national banks, close of June, 1912 and 1913, and changes during 1913.

Kinds of bonds.	Rate.	Held June 30, 1912.	Transactions during 1913.		Held June 30, 1913.
			Deposited.	Withdrawn.	
TO SECURE CIRCULATION.	P. ct.				
United States loan of 1925	4	$23,790,000	$13,187,200	$4,252,700	$32,724,500
United States loan of 1908–1918	3	19,344,620	5,935,820	3,515,040	21,765,400
United States consols of 1930	2	600,248,300	39,184,300	35,053,250	604,379,350
United States Panama Canal, 1916	2	52,397,840	4,005,100	3,683,580	52,719,360
United States Panama Canal, 1918	2	28,712,980	2,507,200	2,279,540	28,940,640
Total	.....	724,493,740	64,819,620	48,784,110	740,529,250
TO SECURE PUBLIC DEPOSITS.					
United States loan of 1925	4	3,716,000	1,476,600	1,412,500	3,780,100
United States loan of 1908–1918	3	3,733,300	1,420,200	1,443,100	3,710,400
United States Panama Canal, 1961	3	16,218,000	6,020,500	4,813,500	17,425,000
United States consols of 1930	2	12,646,700	4,060,200	4,844,700	11,862,200
United States Panama Canal, 1916	2	1,546,500	416,000	451,500	1,511,000
United States Panama Canal, 1918	2	712,000	79,000	264,000	527,000
Philippine loans	4	4,542,000	2,436,000	1,196,000	5,782,000
Porto Rico loans	4	744,000	1,407,000	435,000	1,716,000
District of Columbia	3.65	847,000	373,000	272,000	948,000
Territory of Hawaii	(1)	685,000	1,242,000	157,000	1,770,000
Philippine Railway	4	242,000	830,000	205,000	867,000
Manila Railroad	4	.....	10,000	.....	10,000
State, city, and railroad	(1)	2,677,000	11,885,600	2,825,000	11,737,600
Total	.....	48,309,500	31,656,100	18,319,300	61,646,300

[1] Various.

BONDS HELD AS SECURITY FOR POSTAL SAVINGS FUNDS.

At the close of the fiscal year 1913 the Treasurer of the United States held in trust, under the provisions of the act of June 25, 1910, bonds and securities amounting to $63,851,061.42, as security for postal savings funds deposited in designated depositaries.

The kinds of securities held and the changes therein during the year are recorded in the statement following:

Bonds held to secure postal-savings funds, close of June, 1912 and 1913, and changes during 1913.

Kind of bonds.	Rate.	Held June 30, 1912.	Transactions during 1913.		Held June 30, 1913.
			Deposited.	Withdrawn.	
	P. ct.				
United States loan of 1925	4	$496,900.00	$79,500.00	$15,500.00	$560,900.00
United States loan of 1908–1918	3	548,060.00	148,920.00	78,000.00	618,980.00
United States Panama, 1961	3	4,018,500.00	845,500.00	1,232,500.00	3,631,500.00
United States consols of 1930	2	830,300.00	283,000.00	254,000.00	859,300.00
United States Panama, 1916–1936	2	90,000.00	18,000.00		108,000.00
United States Panama, 1918–1938	2	40,000.00		5,000.00	35,000.00
Philippine loans	4	1,333,000.00	687,000.00	456,000.00	1,564,000.00
Porto Rico loans	4	1,428,000.00	220,000.00	165,000.00	1,483,000.00
District of Columbia	3.65	266,000.00	52,500.00	146,500.00	172,000.00
Territory of Hawaii	(1)	1,000,000.00	411,000.00	263,000.00	1,148,000.00
State loans	(1)	5,683,900.00	3,682,500.00	931,000.00	8,435,400.00
City loans	(1)	23,674,477.94	11,055,042.82	3,439,202.66	31,290,318.10
County loans	(1)	5,264,900.00	2,231,500.00	890,820.00	6,605,580.00
Miscellaneous loans	(1)	5,558,333.32	2,718,700.00	937,950.00	7,339,083.32
Total		50,232,371.26	22,433,162.82	8,814,472.66	63,851,061.42

[1] Various.

The following-described securities, at the respective values herein fixed, will be accepted by the board of trustees as security for postal-savings deposits, viz:

(*a*) Bonds of the United States, of the Philippine Islands, of the District of Columbia, and of Porto Rico, will be accepted at their par value.

(*b*) Bonds of any State of the United States and of the Territory of Hawaii will be accepted at their market value, but if such market value is above par, they will be accepted at their par value.

(*c*) Bonds of any city in the United States having a population of over 30,000, as shown by the latest annual report of the Bureau of the Census, entitled "Official Statistics of Cities having a Population of over Thirty Thousand," which has been in existence for a period of 10 years, which for a period of 10 years previously has not defaulted in the payment of any part of either principal or interest of any funded debt authorized to be contracted by it, and whose *net funded indebtedness* does not exceed 10 per cent of the valuation of its taxable property, to be ascertained by the last preceding valuation for the assessment of taxes, will be accepted at 90 per cent of their market value, but if such market value is above par, they will be accepted at 90 per cent of their par value.

(*d*) Bonds of any other city, town, county, or other legally constituted municipality or district in the United States, which has been in existence for a period of 10 years, which for a period of 10 years previously has not defaulted in the payment of any part of either principal or interest of any funded debt authorized to be contracted by it, and whose *net funded indebtedness* does not exceed 10 per cent of the valuation of its taxable property, to be ascertained by the last preceding valuation for the assessment of taxes, will be accepted at 75 per cent of their market value, but if such market value is above par, they will be accepted at 75 per cent of their par value.

The term "*net funded indebtedness*," for the purposes of paragraphs (*c*) and (*d*), is hereby defined to be the difference between the legal gross indebtedness of a city, town, county, or other municipality (including the amount of any school district or other bonds which depend for their redemption upon taxes levied upon property within the municipality) and the aggregate of the following items:

(1) The total of all sinking funds accumulated for the redemption of such gross indebtedness, except sinking funds applicable to bonds hereafter described in this section.

(2) The amount of outstanding bonds or other debt obligations made payable from current revenues.

(3) The amount of outstanding bonds issued for the purpose of providing the inhabitants of a municipality with public utilities, including the supplying of water or the construction of subways and tunnels for railways: *Provided*, That evidence is submitted showing that the income from such utilities is sufficient for maintenance, for payment of interest on such bonds, and for the accumulation of a sinking fund for their redemption.

(4) The amount of outstanding improvement bonds, issued under laws which provide for the levying of special assessments against abutting property in sufficient amounts to insure the payment of interest on the bonds and the redemption thereof: *Provided*, That such bonds are direct obligations of the municipality and included in the gross indebtedness of the municipality.

The board of trustees reserves the right to reclassify the securities acceptable for deposits and to change the valuation at which they will be accepted. Under no circumstances will securities of other classes than those above named be accepted.

POSTAL SAVINGS BONDS AND INVESTMENTS THEREIN.

The trustees of the Postal Savings System, under a general authority conferred upon them in the postal savings law, have arranged to take over at par any of the postal savings bonds that depositors may wish to turn back.

Under the arrangement outlined in the foregoing the Treasurer of the United States held on June 30, 1913, $117,460 in postal savings bonds, representing investments made by the board of trustees, Postal Savings System. The first investment in these bonds was made on December 9, 1911, when they were quoted in the open market at 92½ cents on the dollar. All of such bonds held by the Treasurer are registered in the name of the board of trustees.

WITHDRAWAL OF BONDS TO SECURE CIRCULATION.

Under the provisions of the act of March 4, 1907, the deposits of lawful money to retire national bank notes was limited to $9,000,000 per month, but this limit was not reached in any month during the past fiscal year. The national bank notes outstanding took on a growth of $14,022,914 during the fiscal year and amounted to $759,157,906 on June 30, 1913, which apparently indicates that there was an active demand for money throughout the country, and under such conditions there was no disposition on the part of the national banks to contract the volume of their circulating notes.

The deposits of lawful money and the amount of bank circulation outstanding may be studied in the monthly statement following:

Month.	Deposits of lawful money.	National-bank notes outstanding.	Month.	Deposits of lawful money.	National-bank notes outstanding.
July	$1,452,000	$744,905,941	February	$4,636,335	$751,117,794
August	1,263,360	746,501,307	March	2,088,497	752,059,332
September	1,804,000	747,779,654	April	1,062,095	753,076,674
October	1,425,425	749,348,859	May	1,552,703	755,294,066
November	785,492	750,185,776	June	3,472,910	759,157,906
December	821,800	750,972,246			
January	1,106,393	750,481,769	Total	21,471,010	

NATIONAL BANKS DESIGNATED AS DEPOSITARIES OF THE UNITED STATES.

The Secretary of the Treasury determines the number of such depositaries and the amount of public money required in each for the transaction of the public business, fixes the amount of balances they may hold, and requires the banks thus designated to give satisfactory security, by the deposit of United States bonds and otherwise, for the safe-keeping and prompt payment of the public money deposited with them, and for the faithful performance of their duties as financial agents of the Government. The regular depositaries receive and disburse the public moneys, while the special depositaries hold only the moneys transferred to them from the Treasury. All of the depositaries are required to pay interest at the rate of 2 per cent per annum from and after June 1, 1913, on the average monthly amount of public deposits held.

The number of national-bank depositaries at the close of the fiscal years 1912 and 1913 may be observed in the statement following:

	Regular.	Special.	Total.
Depositaries June 30, 1912	424	929	1,353
Depositaries June 30, 1913	850	685	1,535

At the close of the fiscal year 1913 there were 1,535 depositary banks and the total amount of public moneys held therein was $76,263,615.06, which was secured by bonds pledged therefor with the Treasurer of the United States.

PUBLIC DEPOSITS IN NATIONAL BANKS.

At the close of the fiscal year 1912 the balance in depositary banks to the credit of the general fund was $37,953,488.51, and to the credit of disbursing officers $10,552,697.26, making a total of $48,506,185.77.

The working balance in the Treasury offices at the beginning of the fiscal year 1913 was $98,742,425.40, an amount largely in excess of the actual requirements of the department for the transaction of the public business. As there was no necessity for withdrawing the public deposits from national banks, there was but slight change in the total holdings of the depositary banks during the first half of the fiscal year.

On January 9, 1913, the Secretary of the Treasury (Mr. MacVeagh), issued Department Circular No. 5, which inaugurated a radical change in the manner of handling and disbursing the public funds. It provided, first, that on and after February 1, 1913, every deposit of funds to the official credit of a disbursing officer (except those stationed in the Philippine Islands) shall be made with the Treasurer of the United States; second, all moneys standing to the official credit of disbursing officers with assistant treasurers and active designated depositary banks at the close of business January 31, 1913, shall be transferred to like credit of such disbursing officers with the Treasurer of the United States, through the medium of the

general account of the Treasurer of the United States; third, all Treasury Department warrants, Post Office Department warrants, disbursing officers' checks, checks in payment of interest on the public debt, and Secretary's special deposit checks shall be drawn on the Treasurer of the United States.

It contemplated that each assistant treasurer and each active designated depositary bank shall pay the warrants and checks enumerated in the foregoing when drawn on the Treasurer of the United States and presented in due course of business; the warrants and checks so paid to be scheduled daily, charged in the regular transcripts of the general account as a transfer of funds, and forwarded to the Treasurer of the United States. It made necessary a more extended use of national banks as Government depositaries, and required an adjustment of the balances then in such depositaries with a view of making a broader distribution of the public funds.

At the end of January, immediately preceding the beginning of operations under the new system of accounting, the balance in banks to the credit of the general fund was $33,426,832.85, and to the credit of disbursing officers $13,154,055.74.

Complying with the instructions given for operations under the new system of accounting, large amounts standing to the credit of disbursing officers on the books of depositary banks were transferred to like credit with the Treasurer of the United States through the medium of the general account, and as a result the balance in banks to the credit of the general fund became $44,423,609.19 by the close of February, while the amount standing to the credit of disbursing officers (principally court funds and postmasters' balances) was reduced to $4,644,873.51, making a total holding of $49,068,482.70.

As the warrants and checks issued on Government account drift to commercial centers, the depositary banks therein were called upon to make payment of these obligations in greater amount than had formerly been the practice; consequently there was necessity for some increase of balances in the depositary banks located in such centers, and the amounts required for the purpose were withdrawn from depositary banks in localities where the funds were not required for such disbursements. The adjustment of balances in banks to meet the changed conditions was continued during the months of March and April without increasing the public deposits therein to any great extent.

On April 30, 1913, the Secretary of the Treasury gave notice that on and after June 1, 1913, all depositary banks would be required to pay interest at the rate of 2 per cent per annum on the average monthly amount of public funds held by them, such interest to be paid semiannally January 1 and July 1 of each year. The depositary banks were requested to advise the department at once whether they desired to continue as depositaries under this new regulation as to the payment of interest, and if they wished to retain the full amount now on deposit or only a portion of the public funds which they are authorized to hold. Less than a dozen of the 1,500 depositaries declined to retain the deposits and pay interest thereon, and a few others requested that the public moneys therein be reduced.

The Secretary also stated that, under section 5153 of the Revised Statutes, national banks which have been or may be designated as

Government depositaries, instead of placing with the Treasurer as security for deposits as heretofore bonds exclusively of the United States or of the provincial Governments for the full amount of their deposits, will hereafter be allowed to secure 70 per cent of such deposits with Government bonds of the above classes and the remaining 30 per cent at the election of the depositary bank, either with similar Government bonds at par or with high-class State, city, and county bonds, acceptable to the Secretary of the Treasury, to be taken as security at 75 per cent of their market value, but not to exceed par.

With the banks paying interest on Government deposits the Secretary is justified in keeping larger balances in the national banks, thereby increasing the volume of money in circulation, and to that extent reducing the amount locked up in the Treasury. The free balance in the general fund at this time being in excess of the immediate requirements of the department the Secretary has authorized the transfer from the Treasury to national bank depositaries in different sections of the country of $10,000,000.

To offset the drain upon the money in circulation in the District of Columbia due to the collection of taxes in the month of May and the deposit of the money in the Treasury of the United States, the Secretary of the Treasury on May 6 directed that the public deposits in the national banks of the District of Columbia be increased by $4,000,000, the transfers to be made in four equal installments on May 15, 26, June 5 and 16, and to be divided among the several banks in proportion to the total deposits therein, and to be secured by bonds deposited with the Treasurer of the United States. Of the amount so placed, the depositary banks were required to return to the Treasury 20 per cent on or before July 15, 1913, 20 per cent on or before August 15, 1913, 10 per cent on or before September 15, 1913, and a like sum on or before the 15th of each succeeding month, making the final payment on or before February 14, 1914. The department reserved the right to demand an earlier return of the money deposited if for any reason it should be deemed advisable. Interest at the rate of 2 per cent per annum is required on this deposit.

At the end of May, 1913, the balance in banks to the credit of the general fund was $46,825,967.40 and to the credit of disbursing officers $5,488,284.91, making a total of $52,314,252.31.

The greater part of the corporation tax is paid in June (the last month of the fiscal year); therefore the income and outgo of public moneys through the depositary banks is greater in this month than in other months of the year. The collectors of internal revenue received payments of this tax until a late hour on the last day of the fiscal year and as a result the collections were deposited in banks, in many instances, after banking hours, and transfers thereof to Treasury offices could not be effected until the succeeding business day.

At the close of the fiscal year on June 30, 1913, the balance in banks to the credit of the general fund was $69,746,133.15, and to the credit of disbursing officers $6,517,481.91, making a total of $76,263,615.06.

GENERAL ACCOUNT OF THE TREASURER OF THE UNITED STATES.

The Treasurer receives and keeps the moneys of the United States and disburses the same upon warrants drawn by the Secretary of the Treasury, countersigned by the Comptroller of the Treasury, and not otherwise. He takes receipts for all moneys paid by him and gives receipts for all moneys received by him; and all receipts for moneys received by him are indorsed upon warrants signed by the Secretary of the Treasury, without which warrant, so signed, no acknowledgment for money received into the Public Treasury is valid. He renders his accounts quarterly, or oftener if required, and at all times submits to the Secretary of the Treasury and the Comptroller of the Treasury, or either of them, the inspection of the moneys in his hands.

As a matter of information, it may be said that all public moneys paid into any subtreasury office, national bank depositary, or other depositary, are placed to the credit of the Treasurer of the United States and held subject to his draft. The public moneys in the hands of any depositary of public moneys may be transferred to the Treasury of the United States or may be transferred from one depositary to any other depositary, as the safety of the public moneys and the convenience of the public service shall require.

The public moneys in any subtreasury, mint, or other depositary are subject to special examination and count whenever it is deemed advisable by the Secretary of the Treasury. Such examinations of the moneys in the subtreasuries are frequently made by committees representing the Secretary and the Treasurer. Annual examinations of the public moneys in mints are made by committees selected by the Director of the Mint, but as these moneys are a part of the general account it is suggested that the Treasurer of the United States should have a representative on all such committees.

Under the operations of department circular No. 5, an immense volume of accounting was transferred to the office of the Treasurer, requiring a large addition to the clerical force for the performance of the duties. All credits to disbursing officers are now placed on the books of the Treasurer, and such disbursing officers conduct their business with the Treasurer of the United States only. There are about 4,000 accounts with balances, of which more than 1,900 are very active. The checks handled daily on these accounts number approximately 30,000, and the regulations require monthly statements of transactions in each account to be rendered to the respective disbursing officers.

MONETARY STOCK.

The figures annexed give the data for a comparison of the monetary stock of the country at the close of June, 1912 and 1913. The gold coin and bullion show an increase in the fiscal year 1913 of $52,573,418. The silver coins advanced in volume by $4,872,034. United States notes remained under the law unchanged. Treasury notes fell off $269,000. National-bank notes received an increment of $14,022,914. The net increase during the fiscal year was $71,199,366.

Monetary stock.

[This statement represents the monetary stock of the United States, as shown by the revised statements for June 30, 1912 and 1913.]

Kinds.	In Treasury and mints.	In circulation.	Total stock.
JUNE 30, 1912.			
Gold coin and bullion	$1,207,464,264	$610,724,153	$1,818,188,417
Silver dollars	495,009,446	70,339,574	565,349,020
Subsidiary silver	25,554,007	145,034,198	170,588,205
Total metallic	1,728,027,717	826,097,925	2,554,125,642
United States notes	8,983,695	337,697,321	346,681,016
Treasury notes of 1890	13,430	2,915,570	2,929,000
National-bank notes	39,992,733	705,142,259	745,134,992
Total notes	48,989,858	1,045,755,150	1,094,745,008
Aggregate metallic and notes	1,777,017,575	1,871,853,075	3,648,870,650
Gold certificates	96,621,751	943,435,618	.....
Silver certificates	12,324,600	469,224,400	.....
Total certificates	108,946,351	1,412,660,018	.....
Aggregate	.....	3,284,513,093	3,648,870,650
JUNE 30, 1913.			
Gold coin and bullion	1,262,361,036	608,400,799	1,870,761,835
Silver dollars	493,486,070	72,127,193	565,613,263
Subsidiary silver	20,737,926	154,458,070	175,195,996
Total metallic	1,776,585,032	834,986,062	2,611,571,094
United States notes	9,465,836	337,215,180	346,681,016
Treasury notes of 1890	3,330	2,656,670	2,660,000
National-bank notes	43,403,670	715,754,236	759,157,906
Total notes	52,872,836	1,055,626,086	1,108,498,922
Aggregate metallic and notes	1,829,457,868	1,890,612,148	3,720,070,016
Gold certificates	82,949,460	1,003,997,709	.....
Silver certificates	14,421,408	469,128,592	.....
Total certificates	97,370,868	1,473,126,301	.....
Aggregate	.....	3,363,738,449	3,720,070,016

RATIO OF GOLD TO THE TOTAL STOCK OF MONEY.

The annual growth in the volume of gold as compared with the total stock of money since July 1, 1906, may be observed in the table following:

Ratio of gold to total stock of money from July 1, 1906.

[From the revised statements of the Treasury Department.]

Dates.	Total stock of money.	Gold.	Per cent.
July 1, 1906	$3,069,976,591	$1,475,706,765	48.07
July 1, 1907	3,115,728,887	1,466,389,101	47.06
July 1, 1908	3,378,764,020	1,618,133,492	47.89
July 1, 1909	3,406,328,354	1,642,041,999	48.20
July 1, 1910	3,419,591,483	1,636,043,478	47.85
July 1, 1911	3,555,958,977	1,753,196,722	49.30
July 1, 1912	3,648,870,650	1,818,188,417	49.82
July 1, 1913	3,720,070,016	1,870,761,835	50.28

MONEY IN CIRCULATION.

The money in circulation has again broken the record of previous years and attained a maximum at $3,363,738,449 on June 30, 1913. The increase during the last fiscal year was $79,225,356, of which $58,238,737 was in gold coin and gold certificates. The circulation per capita was $34.56.

It will be observed that the volume of national-bank notes in circulation took on a growth of $10,611,977 as compared with that of 12 months earlier. It has been asserted by financial students that this increase in bank notes at a time of low-money rates would inevitably have a tendency to produce exports of gold. If such results be expected, it will be of interest to learn what proportion of the total circulation the national-bank notes represent as compared with the gold, silver, and United States notes. This is shown in the statement following:

	July 1—			
	1906	1909	1911	1913
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
Gold coin and certificates	43.30	45.53	47.28	47.93
Silver coin and certificates	24.13	21.96	20.67	20.68
United States notes	12.54	11.08	10.65	10.11
Treasury notes of 1890				
National-bank notes	20.03	21.43	21.40	21.28
Total	100.00	100.00	100.00	100.00

The most noticeable movement shown by this comparison is the great increase in the gold circulation.

The kinds of money in circulation, the circulation per capita, and the percentage of gold coin and certificates to the total circulation may be studied from the subjoined table:

Money in circulation at the end of each fiscal year from 1906.

Fiscal years.	Money in circulation.					Circulation per capita.	Percentage of gold coin and certificates to total circulation.
	Gold coin and gold certificates.	United States notes and Treasury notes.	National-bank notes.	Silver coin and silver certificates.	Total.		
1906	$1,185,216,924	$343,277,540	$548,001,238	$660,150,926	$2,736,646,628	32.32	43.30
1907	1,161,769,670	348,245,590	589,242,125	673,699,070	2,772,956,455	32.22	41.90
1908	1,396,221,429	344,359,852	631,648,680	665,785,527	3,038,015,488	34.72	45.95
1909	1,414,343,147	344,321,682	665,538,806	682,037,022	3,106,240,657	34.93	45.53
1910	1,393,632,192	338,450,395	683,659,535	686,613,483	3,102,355,605	34.33	44.91
1911	1,519,663,467	342,226,378	687,701,283	664,411,468	3,214,002,596	34.20	47.28
1912	1,554,159,771	340,612,891	705,142,259	684,598,172	3,284,513,093	34.34	47.31
1913	1,612,398,508	339,871,850	715,754,236	695,713,855	3,363,738,449	34.56	47.93

CIRCULATION AND POPULATION.

The population of the United States, it is estimated, has increased over 12,000,000 since July 1, 1906, and the money in circulation for the same period has taken on a growth of more than $630,000,000.

The per capita circulation grew in the meantime from $32.32 to $34.56. It is apparent from the increasing growth in the amount of money in circulation that it is equal to if not in excess of the legitimate demand therefor. The extension of habitation into remote districts, multiplication of lines of traffic, and the development of industrial activities are some of the requirements that must be provided for by an annual increase of money in circulation.

Statistics relative to the money in circulation and the population, by years, may be studied in the annexed table:

Increase in population and in circulation per capita.

Fiscal years.	Money in circulation	Population.	Circulation per capita.	Per cent of increase of population per year.	Per cent of increase of circulation per capita per year.
1906	$2,736,646,628	84,662,000	32.32	1.7	3.9
1907	2,772,956,455	86,074,000	32.22	1.7	[1].3
1908	3,038,015,488	87,496,000	34.72	1.6	7.8
1909	3,106,240,657	88,926,000	34.93	1.6	.6
1910	3,102,355,605	90,363,000	34.33	1.6	[1]1.7
1911	3,214,002,596	93,983,000	34.20	4.0	[1].3
1912	3,284,513,093	95,656,000	34.34	1.7	.4
1913	3,363,738,449	97,337,000	34.56	1.7	.6

[1] Decrease.

CONDITION OF THE UNITED STATES PAPER CURRENCY.

The total stock of paper currency in the United States amounted to $2,678,776,091 at the close of the last fiscal year, of which the National Government issued $1,919,618,185, or 71.7 per cent, and the national banks $759,157,906, or 28.3 per cent. The pieces outstanding of the denominations of $5 and under number 327,008,021, of which the Government issued 297,831,944, or 90 per cent, and the national banks 29,176,077, or 9.9 per cent.

During the fiscal year 1913 the Government issued 318,264,407 pieces of paper currency of the total value of $1,035,462,000, while 291,131,640 pieces of worn and unfit paper money of the total value of $987,060,200 were redeemed and retired.

National banks are precluded from issuing $1 and $2 notes, and the issue of $5 notes is limited to one-third in amount of the total circulation of the banks. Experience shows that a large number of the banks are reluctant to issue $5 notes. If the option of one-third in $5 bills had been taken by all national banks the normal supply of such bank bills on June 30, 1913, would have been $253,052,635 instead of the amount reported, viz, $143,751,670.

National-bank notes are not available for "reserves," and for this reason large amounts of such circulation are returned to the Treasury by the banks for redemption in order to replenish their "reserves." The expense of transportation to the Treasury in such cases is borne by the bank of issue, while the return of the proceeds is at the expense of the owner of the notes. The owners of Government paper currency sent to the Treasury for redemption have to pay the transportation charges both ways, and the payment of these charges under contract rates gives rise to a burden that does not bear equally upon

the banks and other business interests in the different sections of the country, as for instance, the contract rates from Chicago, St. Louis, and Boston to Washington are 20 cents per $1,000, while such rates from Savannah, Charleston, Richmond, and other southern cities to Washington are 60 cents per $1,000.

It would be a wise and popular measure for the Government to bear the expense of transporting its unfit currency to the Treasury for redemption; and it can well afford to do this, for by the use of the registered mail, with the insurance feature attached, it would give equal opportunities to the people of all sections and reduce the expense. Banking institutions in all parts of the country are resorting to this method of transportation with satisfactory results. There can be no objection to the same use of the registered mail by the Government.

It is apparent that there is necessity for legislation that will equalize the expense of redemption between the different sections of the country. This may be accomplished through a more extended use of the registered mail, and in this connection the Treasurer renews the suggestion of his predecessor that recommendation be made to Congress for legislation that will remove the limit on the weight of a package which may be sent through the registered mail of the United States and that will authorize the transportation of moneys to and from the Treasury or between Treasury offices by registered mail, insured.

Laundering machines for cleaning United States paper money received for redemption, and rendering such currency fit for further circulation, have been installed in the Treasury at Washington and the subtreasuries at New York, Boston, Philadelphia, and Chicago. In planning work for these machines it was anticipated that the subtreasuries at Baltimore, St. Louis, Cincinnati, and New Orleans would furnish from 15,000 to 20,000 notes each daily, but actual results demonstrated the fact that these offices could supply only an average of about 4,000 notes each per day. In the Treasury at Washington there was lack of employees to properly handle this work, so that the product of the machines has been confined to such material as could be readily furnished, being silver certificates of the denominations of $1, $2, and $5, and approximately 150,000 notes are now cleaned daily at the Treasury and the subtreasuries. It is expected that the number of pieces will be increased to at least 200,000 in a short time.

It is not contended that the washed notes are equal to or will give as much service as new notes, but it is believed that the life of usefulness of the laundered notes will be prolonged at a very small expense.

UNITED STATES NOTES.

The principal issue of United States paper money is officially called United States notes. These are the well-known "greenbacks" or "legal tenders," the first issue of which was authorized by the act of February 25, 1862. The total amount authorized was $450,000,000, and the highest amount outstanding at any time was $449,338,902, on January 30, 1864.

Under the operations of enactments by Congress authorizing the canceling and retiring of these notes as they were received in the Treasury, the amount outstanding had been reduced more than

$100,000,000 when the process was finally stopped by the act of May 31, 1878, which required the notes to be reissued when redeemed. At that time the amount outstanding was $346,681,016 and it has not been changed since.

The United States notes issued and redeemed during the last fiscal year were $163,000,000, an amount that has not been exceeded in any year since the close of the War of the Rebellion. The demand for small denominations of currency is at all times urgent. The growth in the volume of United States notes of the denomination of $5 outstanding is the result of the efforts made by the department to supply the demand through the process of redemption and reissue—that is to say, by substituting the smaller denomination for the higher denominations redeemed and retired.

The amounts issued and redeemed by denominations during the fiscal year 1913 are recorded in the annexed table:

Denominations.	Outstanding June 30, 1912.	Fiscal year 1913.		Outstanding June 30, 1913
		Issued.	Redeemed.	
One dollar	$1,830,994		$4,012	$1,826,982
Two dollars	1,374,959		3,918	1,371,041
Five dollars	169,049,930	$135,520,000	109,762,350	194,807,580
Ten dollars	114,137,926	27,480,000	45,680,430	95,937,496
Twenty dollars	12,192,432		2,127,540	10,064,892
Fifty dollars	1,841,375		154,150	1,687,225
One hundred dollars	4,696,400		488,600	4,207,800
Five hundred dollars	4,470,000		435,000	4,035,000
One thousand dollars	38,077,000		4,344,000	33,733,000
Five thousand dollars				
Ten thousand dollars	10,000			10,000
Total	347,681,016	163,000,000	163,000,000	347,681,016
Unknown, destroyed	1,000,000			1,000,000
Net	346,681,016	163,000,000	163,000,000	346,681,016

TREASURY NOTES OF 1890.

The Treasury notes of 1890 are slowly disappearing under the provisions of the act of March 14, 1900. The total amount of these notes issued for the purchase of silver bullion to November 1, 1893, the date of the repeal of the act, was $155,931,002. The amount redeemed and retired during the fiscal year 1913 was $269,000, and the amount outstanding at the close of the year was $2,660,000, against which standard silver dollars in equal amount are held in the trust funds for their redemption when presented.

The amount outstanding, by denominations, on June 30 for the past seven years is stated in Table No. 21, page 264.

GOLD CERTIFICATES.

The gold certificates continue to advance in volume year by year and to add strength to our circulation. There is no limit to the volume that may be issued for gold coin and bullion presented at the Treasury offices. The amount outstanding at the close of the last fiscal year was $1,086,727,169, an increase of $46,669,800 as compared with that of the previous year. The denominations of these certificates are restricted to $10 and above, but as the department is limited in its resources for the issue of currency of small denominations it be-

comes more apparent each year that a $5 gold certificate is an absolute necessity. Large amounts of gold certificates are returned to the Treasury daily for redemption usually accompanied with a request for the return of a part of the proceeds in denominations of $5. If the department were clothed with authority to issue a $5 gold certificate, it would be in condition to respond to all demands for denominations of $5 and under.

The gold certificates issued and redeemed, by denominations, during the fiscal year 1913 are stated in the table following:

Denominations.	Outstanding June 30, 1912.	Fiscal year 1913.		Outstanding June 30, 1913.
		Issued.	Redeemed.	
Ten dollars	$226,435,300	$179,360,000	$117,389,190	$288,406,110
Twenty dollars	256,496,964	103,680,000	82,625,760	277,551,204
Fifty dollars	55,053,055	19,400,000	15,727,800	58,725,255
One hundred dollars	80,127,550	24,400,000	20,377,950	84,149,600
Five hundred dollars	18,239,000	4,100,000	4,039,500	18,299,500
One thousand dollars	66,765,500	10,500,000	12,320,000	64,945,500
Five thousand dollars	95,020,000	10,000,000	28,290,000	76,730,000
Ten thousand dollars	241,920,000	117,070,000	141,070,000	217,920,000
Total	1,040,057,369	468,510,000	421,840,200	1,086,727,169

SILVER CERTIFICATES.

The volume of silver certificates outstanding increased during the fiscal year from $481,549,000 to $483,550,000, and this growth was in denominations of $1, $2, and $5.

The resources of the department for the issue of silver certificates of the smaller denominations, which are in great demand, is limited to the free silver dollars in the Treasury, however this resource is augmented through the process of redemption and reissue. The silver certificates of the denominations of $10 and above as they are redeemed are reissued in denominations of $5 and under.

The transactions in silver certificates, by denominations, during the last fiscal year are shown in the following table:

Denominations.	Outstanding June 30, 1912.	Fiscal year 1913.		Outstanding June 30, 1913.
		Issued.	Redeemed.	
One dollar	$161,327,436	$204,048,000	$186,520,307	$178,855,129
Two dollars	62,854,116	68,664,000	65,358,493	66,159,623
Five dollars	227,178,187	131,240,000	139,353,110	219,065,077
Ten dollars	20,757,611	.....	8,952,340	11,805,271
Twenty dollars	4,488,670	.....	683,700	3,804,970
Fifty dollars	4,417,760	.....	1,023,550	3,394,210
One hundred dollars	480,220	.....	57,500	422,720
Five hundred dollars	22,000	.....	1,000	21,000
One thousand dollars	23,000	.....	1,000	22,000
Total	481,549,000	403,952,000	401,951,000	483,550,000

CHANGES IN DENOMINATIONS.

Experience in all recent years makes clear that the supply of small notes is hardly equal to the demand. No rule can be set up by theory of the proper ratio of the several denominations to each other.

The needs of business must be recognized and obeyed. Those needs make constant demand for small bills as instruments of local trade. The burden of supplying the smaller denominations required falls upon the Treasury, and it has employed all its resources to respond to the conditions. Through the process of redeeming the larger denominations of United States currency and issuing smaller denominations in lieu thereof the Treasury has been enabled to supply the greater part of the demand for such bills.

The total amount of United States paper currency of each denomination issued, redeemed, and outstanding at the close of the fiscal year 1913 is recorded in the annexed statement:

Denominations.	Outstanding June 30, 1912.	Fiscal year 1913.		Outstanding June 30, 1913.
		Issued.	Redeemed.	
One dollar	$163,532,036	$204,048,000	$186,531,964	$181,048,072
Two dollars	64,470,819	68,664,000	65,368,956	67,765,863
Five dollars	396,916,277	266,760,000	249,171,570	414,504,707
Ten dollars	362,229,307	206,840,000	172,133,010	396,936,297
Twenty dollars	273,613,036	103,680,000	85,492,600	291,800,436
Fifty dollars	61,326,740	19,400,000	16,906,550	63,820,190
One hundred dollars	85,470,670	24,400,000	20,943,050	88,927,620
Five hundred dollars	22,731,000	4,100,000	4,475,500	22,355,500
One thousand dollars	104,976,500	10,500,000	16,677,000	98,799,500
Five thousand dollars	95,020,000	10,000,000	28,290,000	76,730,000
Ten thousand dollars	241,930,000	117,070,000	141,070,000	217,930,000
Total	1,872,216,385	1,035,462,000	987,060,200	1,920,618,185
Unknown, destroyed	1,000,000			1,000,000
Net	1,871,216,385	1,035,462,000	987,060,200	1,919,618,185

PIECES OF UNITED STATES PAPER CURRENCY OUTSTANDING.

The demand for small denominations of paper currency, which is supplied through the process of redeeming the larger denominations and issuing smaller denominations in lieu thereof, causes a steady increase in the number of pieces of United States paper currency outstanding. This increase may be observed from a comparative monthly statement thereof for the fiscal years 1912 and 1913, as follows:

Months.	Fiscal year 1912, outstanding.		Fiscal year 1913, outstanding.	
	Number of pieces.	Total value.	Number of pieces.	Total value.
July	311,953,862	$1,809,902,685	331,009,946	$1,875,485,285
August	313,376,715	1,811,631,685	336,404,037	1,893,203,285
September	315,080,350	1,816,968,685	343,583,145	1,912,097,185
October	320,864,851	1,832,162,685	342,643,988	1,895,800,185
November	325,081,763	1,843,824,685	346,471,441	1,908,418,185
December	327,702 331	1,850,896,385	351,425,617	1,925,699,185
January	328,978,951	1,870,944,385	347,504,385	1,915,014,185
February	322,490,473	1,854,363,385	343,821,000	1,901,945,185
March	323,892,474	1,866,286,385	347,337,622	1,893,839,185
April	325,096,917	1,871,140,385	349,741,218	1,906,185,185
May	325,967,213	1,868,756,385	353,155,771	1,912,843,185
June	327,329,159	1,872,216,385	354,461,922	1,920,618,185

PAPER CURRENCY, BY DENOMINATIONS, OUTSTANDING JUNE 30, 1913.

The amount of each kind of paper currency outstanding, by denominations, may be studied in the monthly statement for June, 1913:

Denomination.	United States notes.	Treasury notes of 1890.	National-bank notes.	Gold certificates.	Silver certificates.	Total.
One dollar	$1,826,982	$365,961	$343,587	----------	$178,855,129	$181,391,659
Two dollars	1,371,041	235,199	164,312	----------	66,159,623	67,930,175
Five dollars	194,807,580	632,050	143,751,670	----------	219,065,077	558,256,377
Ten dollars	95,937,496	787,420	331,208,900	$288,406,110	11,805,271	728,145,197
Twenty dollars	10,064,892	379,370	230,391,800	277,551,204	3,804,970	522,192,236
Fifty dollars	1,687,225	13,500	19,587,900	58,725,255	3,394,210	83,408,090
One hundred dollars	4,207,800	147,500	34,855,550	84,149,600	422,720	123,783,170
Five hundred dollars	4,035,000	----------	89,000	18,299,500	21,000	22,444,500
One thousand dollars	33,733,000	99,000	23,000	64,945,500	22,000	98,822,500
Five thousand dollars	----------	----------	----------	76,730,000	----------	76,730,000
Ten thousand dollars	10,000	----------	----------	217,920,000	----------	217,930,000
Fractional parts	----------	----------	52,007	----------	----------	52,007
Total	347,681,016	2,660,000	760,467,726	1,086,727,169	483,550,000	2,681,085,911
Unknown, destroyed	1,000,000	----------	[1] 1,309,820	----------	----------	2,309,820
Net	346,681,016	2,660,000	759,157,906	1,086,727,169	483,550,000	2,678,776,091

[1] Redeemed but not assorted by denominations.

RATIO OF SMALL DENOMINATIONS TO ALL PAPER CURRENCY.

The ratio of denominations of $10 and less to the total paper currency, by fiscal years since 1906, is recorded in the statement following:

Dates.	Total paper currency.	Denominations of $10 and less.				
		One dollar.	Two dollars.	Five dollars.	Ten dollars.	Total.
		Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per ct.*
July 1, 1906	$1,953,712,245	5.31	2.51	19.67	27.43	54.93
July 1, 1907	2,111,659,575	5.24	2.69	19.48	25.84	53.26
July 1, 1908	2,345,130,802	4.92	2.46	20.79	26.00	54.19
July 1, 1909	2,375,261,959	5.33	2.44	19.84	25.77	53.40
July 1, 1910	2,419,600,310	5.93	2.54	20.62	26.53	55.62
July 1, 1911	2,538,656,263	6.02	2.45	20.39	26.28	55.16
July 1, 1912	2,619,224,099	6.25	2.46	20.55	26.33	55.65
July 1, 1913	2,681,085,911	6.76	2.53	20.82	27.15	57.28

COST OF PAPER CURRENCY.

The paper currency issued by the United States is said to be superior to that of any other nation in the world. The quality of the material used and the artistic work of the engraver give us a product that presents almost insurmountable obstacles to those who would profit by false imitations. Inquiries often reach the department relating to the production and the cost of the paper currency.

As a matter of information it may be stated that the paper used is made by a secret process under Treasury supervision by annual con-

tract under competitive bids. The Bureau of Engraving and Printing, a branch of the department, designs, under the direction of the Secretary, engraves, and prints the notes and certificates complete. This currency is delivered to the Treasurer in packages of 4,000 notes, the product of 1,000 sheets of paper. Such a package is taken as the unit from which to reckon the cost.

With the allowance for every item of expense attending the making, the issue, and the redemption of this paper currency, it appears that the average cost is as follows:

Total average expense of 4,000 notes issued	$52. 50
Total average expense of 4,000 notes redeemed	8. 54
Aggregate average expense of issue and redemption	61. 04

From the foregoing it may be readily ascertained that the average cost for each note is 1.526 cents. Calculations based upon these average expenses of issue and redemption indicate results that will be very close to the actual cost of maintenance of the paper currency, and such cost for the fiscal years 1912 and 1913 may be studied from the details set forth in the annexed table:

Total expenses of issue and redemption.

Fiscal years.	Number of pieces.	Cost per 1,000 pieces.	Total cost.
1912.			
Issued	290,809,347	$13.125	$3,816,872.68
Redeemed	273,426,336	2.135	583,765.23
Total			4,400,637.91
1913.			
Issued	318,264,407	13.125	4,177,220.34
Redeemed	291,131,640	2.135	621,566.05
Total			4,798,786.39

United States paper currency outstanding and cost of maintenance.

Fiscal years.	Amount outstanding.	Cost of maintenance.	
		Amount.	Per cent.
1912	$1,871,216,385	$4,400,637.91	0.235
1913	1,919,618,185	4,798,786.39	.249

In this connection attention is invited to the saving of abrasion on the gold and silver coins held in the Treasury against outstanding certificates and notes, which to all intents and purposes is an offsetting item against the cost of the paper currency issued directly by the Government, though not so treated in the foregoing calculations.

AVERAGE LIFE OF PAPER CURRENCY.

The large amounts of the various kinds of currency presented for redemption, and its condition, lead to the conclusion that the service of our paper money is materially shortened by the increasing activities of such currency in the channels of trade. This is especially noticeable in the smaller denominations, $5 and under.

The average lifetime of each note, in years by kinds, may be studied in the subjoined statement:

Denominations.	United States notes.	Treasury notes.	Gold certificates.	Silver certificates.	National-bank notes.
One dollar	3.12	1.74	.....	1.06	4.42
Two dollars	3.23	1.87	.....	1.23	4.51
Five dollars	2.93	2.96	.....	1.88	2.80
Ten dollars	3.63	3.72	1.66	3.39	2.62
Twenty dollars	5.94	4.00	3.13	4.00	3.01
Fifty dollars	6.15	3.72	3.46	3.12	3.97
One hundred dollars	6.12	3.63	3.55	2.78	3.84
Five hundred dollars	3.80	.....	3.44	1.88	5.09
One thousand dollars	4.18	1.91	3.31	1.41	3.32
Five thousand dollars	.32	.....	1.93	.....	.....
Ten thousand dollars	.16	.....	1.63	.....	.....
All denominations	3.32	2.20	2.36	1.31	2.85

PAPER CURRENCY PREPARED FOR ISSUE AND AMOUNT ISSUED.

The growth in business activities, and the tendency toward the use of small denominations are gradually increasing the pieces of United States paper currency in circulation, which numbered 354,461,922 on June 30, 1913, of the total value of $1,920,618,185. The Government issues the greater part of the paper currency required; therefore it is incumbent upon the Treasury to maintain this great number of pieces and to provide for the annual growth of the smaller denominations so much in demand in the channels of trade. Experience and forethought prompt the preparation of an adequate volume of paper currency of the kinds and denominations authorized by law in advance of putting same into circulation. The reserve vault should be well stocked with such paper, and it should be retained there until it is thoroughly seasoned before it is issued. Heretofore but little progress has been made in accumulating a sufficient reserve of such bills, but it is believed that with the improved facilities now in operation the output in future will be ample for this purpose.

The number of pieces and amount of paper currency prepared for issue and the amount issued since 1906 are recorded in the table here:

Fiscal years.	Prepared for issue.			Paper currency issued.		
	Number of notes and certificates.	Total value.	Average value.	Number of notes and certificates.	Total value.	Average value.
1906	157,425,000	$602,172,000	$3.825	172,930,548	$629,826,000	$3.642
1907	178,180,000	679,480,000	3.813	173,093.911	698,273,000	4.034
1908	197,012,000	858,944,000	4.359	188,999,912	804,326,000	4.255
1909	206,898,000	637,320,000	3.080	202,746,192	764,510,000	3.770
1910	235,210,400	809,579,600	3.441	240,990,922	767,115,600	3.183
1911	268,450,000	957,744,000	3.567	267,207,921	913,540,000	3.418
1912	301,302,000	990,096,000	3.286	290,809,347	916,852,000	3.152
1913	307,188,000	903,716,000	2.941	318,264,407	1,035,462,000	3.253

United States paper currency issued during the fiscal years 1912 and 1913.

Months.	Fiscal year 1912.			Fiscal year 1913.		
	Number of notes and certificates.	Total value.	Average value of notes and certificates.	Number of notes and certificates.	Total value.	Average value of notes and certificates.
July	24,359,190	$74,750,000	$3.068	24,502,669	$74,774,000	$3.051
August	23,717,538	75,400,000	3.179	26,002,122	85,066,000	3.271
September	22,909,048	73,250,000	3.197	26,877,306	81,360,000	3.027
October	25,812,850	79,530,000	3.081	29,328,778	92,080,000	3.139
November	24,369,960	70,984,000	2.912	24,284,613	79,430,000	3.270
December	24,397,983	74,110,000	3.037	27,854,516	96,652,000	3.469
January	24,773,893	96,390,000	3.890	28,144,055	94,870,000	3.370
February	20,986,685	62,970,000	3.000	23,538,549	74,022,000	3.144
March	24,305,304	81,152,000	3.338	26,781,873	80,878,000	3.020
April	25,460,161	77,518,000	3.044	26,197,840	87,958,000	3.357
May	24,682,372	73,304,000	2.969	27,768,548	96,772,000	3.484
June	25,034,363	77,494,000	3.095	26,983,538	91,600,000	3.394
Total	290,809,347	916,852,000	3.152	318,264,407	1,035,462,000	3.253
Per cent of increase over preceding year	8.8	0.4	.....	9.4	12.9	.....

SUPPLY OF UNITED STATES PAPER CURRENCY HELD IN RESERVE.

For the past two or three years practically the whole output of small denominations was required for issue; consequently but little progress was made in storing up an adequate supply of notes and certificates fitted for good service.

A comparison by number of pieces of each denomination and total value of the United States paper currency held in the reserve vault at the close of the fiscal years 1912 and 1913 may be observed in the following statement:

Denominations.	Held June 30, 1912.		Held June 30, 1913.	
	Number of pieces.	Total value.	Number of pieces.	Total value.
One dollar	12,188,000	$12,188,000	7,492,000	$7,492,000
Two dollars	5,716,000	11,432,000	3,076,000	6,152,000
Five dollars	5,776,000	28,880,000	5,060,000	25,300,000
Ten dollars	7,376,000	73,760,000	5,492,000	54,920,000
Twenty dollars	2,968,000	59,360,000	2,284,000	45,680,000
Fifty dollars	740,000	37,000,000	352,000	17,600,000
One hundred dollars	140,000	14,000,000	94,000	9,400,000
Five hundred dollars	35,700	17,850,000	27,500	13,750,000
One thousand dollars	31,800	31,800,000	21,300	21,300,000
Five thousand dollars	2,000	10,000,000	4,000	20,000,000
Ten thousand dollars	5,600	56,000,000	4,000	40,000,000
Order gold certificates	8,837	88,370,000	4,730	47,300,000
Total	34,987,937	440,640,000	23,911,530	308,894,000

REDEMPTIONS OF PAPER CURRENCY.

The redemptions of currency have steadily increased and are now nearly equal to the issues. There were 291,131,640 pieces of United States paper currency redeemed during the last fiscal year, an increase of 17,705,304 pieces, or 6.47 per cent, over those of the preceding 12 months. The pieces redeemed were 322,293 greater than those issued in 1912.

The transactions, by months, for the past two fiscal years are recorded in the table following:

United States paper currency redeemed during the fiscal years 1912 and 1913.

Months.	Fiscal year 1912.			Fiscal year 1913.		
	Number of notes and certificates.	Total value.	Average value of notes and certificates.	Number of notes and certificates.	Total value.	Average value of notes and certificates.
July	22,351,476	$74,144,000	$3.317	20,821,974	$71,505,100	$3.434
August	22,294,686	73,671,000	3.304	20,607,940	67,348,000	3.268
September	21,205,410	67,913,000	3.202	19,698,199	62,466,100	3.171
October	20,028,349	64,336,000	3.212	30,267,934	108,377,000	3.580
November	20,152,651	59,322,000	2.943	20,457,160	66,812,000	3.265
December	21,777,812	67,038,300	3.078	22,900,337	79,371,000	3.465
January	23,497,273	76,342,000	3.248	32,065,288	105,555,000	3.291
February	27,475,164	79,551,000	2.895	27,221,933	87,091,000	3.199
March	22,903,304	69,229,000	3.226	23,265,250	88,984,000	3.824
April	24,255,717	72,658,000	2.995	23,794,245	75,612,000	3.177
May	23,812,075	75,694,000	3.178	24,353,996	90,114,000	3.700
June	23,672,419	74,034,000	3.127	25,677,384	83,825,000	3.264
Total	273,426,336	853,932,300	3.123	291,131,640	987,060,200	3.390
Per cent of increase over preceding year	8.85	5.7	.....	6.47	15.58	.....

STANDARD SILVER DOLLARS.

The stock of standard silver dollars at the close of the fiscal year 1913 was $565,613,263, of which $72,127,193 were in circulation, and $493,486,070 were held in the Treasury, against which silver certificates to the amount of $483,550,000 were outstanding. There is some demand for these silver dollars, which are shipped to depositors therefor at the expense of the consignee for transportation charges. The amount so distributed during the last fiscal year was $12,560,078, an increase of $718,204 as compared with such shipments in 1912.

The shipments, by offices, for the past three fiscal years are set out in the statement following:

	Fiscal year—		
	1911	1912	1913
Washington	$489,475	$475,045	$579,638
Baltimore	146,400	64,400	122,700
New York	183,125	151,500	183,125
Philadelphia	848,200	801,250	774,375
Boston	349,200	276,600	267,100
Cincinnati	2,381,735	2,077,639	2,025,625
Chicago	3,458,500	2,894,875	3,018,900
St. Louis	3,457,445	2,780,425	3,367,275
New Orleans	2,082,700	1,848,700	1,703,500
San Francisco	518,800	289,900	373,950
Mint, New Orleans	10,000	.....	.....
Mint, Philadelphia	134,755	181,540	143,890
Mint, San Francisco	200	.....	.....
Total	14,060,535	11,841,874	12,560,078

SUBSIDIARY SILVER COIN.

The general stock of subsidiary silver coin in the United States at the close of the fiscal year 1913 was $175,195,996, an increase of $4,607,791, as compared with that of 1912. The amount in circulation was $154,458,070, and there were held as assets in the Treasury

$20,737,926. The amount of these coins shipped to depositors therefor in 1913 was $22,767,796.80, as against like shipments of $21,476,457.40 in 1912, an increase of $1,291,339.40.

The subsidiary silver coins are redeemable in the lawful money of the United States, and under the operation of this provision of law there is usually an accumulation of these coins in the Treasury offices from January to June, but after this period the seasonable movement begins and great quantities are distributed, either to depositors therefor by express, at the expense of the consignee for transportation charges, or are paid over the counter at subtreasuries in exchange for other kinds of money.

The amount shipped to depositors therefor, by offices, during the past three fiscal years is recorded in the subjoined table:

Offices.	Fiscal year—		
	1911	1912	1913
Washington	$775,067.60	$1,010,360.60	$1,183,200.30
Baltimore	549,910.00	534,605.00	581,210.00
New York	4,844,259.40	4,009,295.00	3,630,364.80
Philadelphia	2,334,375.00	2,412,135.00	2,731,885.00
Boston	1,362,400.00	1,410,380.00	1,379,600.00
Cincinnati	1,718,591.00	1,808,300.00	1,751,551.00
Chicago	2,950,940.00	2,576,932.00	2,856,696.80
St. Louis	2,199,495.00	1,564,450.00	2,029,998.00
New Orleans	1,196,300.00	1,384,720.00	1,579,595.00
San Francisco	797,545.00	755,510.00	615,895.00
Mint, Denver	1,505,499.80	1,221,930.80	1,808,193.80
Mint, New Orleans	1,087,285.00		
Mint, Philadelphia	635,180.00	2,787,839.00	2,619,607.10
Total	21,956,847.80	21,476,457.40	22,767,796.80

MINOR COIN.

These token coins form no part of the stated stock of money in the country, but the demand for them attest their popularity in the channels of trade. They are redeemable in the lawful money of the United States when presented in sums or multiples of $20 to the Treasurer or any Assistant Treasurer.

The net addition made to the outstanding during the last fiscal year was $4,106,794.86, of which $1,056,814.12 was in bronze cents and $3,050,724.55 in nickel 5-cent pieces, while the older coins decreased $743.81.

The amount of each denomination of minor coin outstanding at the close of the fiscal years 1912 and 1913 may be studied in the statement following.

	Outstanding June 30, 1912.	Fiscal year 1913.		Outstanding June 30, 1913.
		Issued.	Remelted.	
Copper cents	$1,182,060.03		$59.81	$1,182,000.22
Copper half cents	39,926.11			39,926.11
Copper nickel cents	1,203,758.56		215.00	1,203,543.56
Bronze 1-cent pieces	20,106,972.29	$1,078,292.60	21,478.48	21,163,786.41
Bronze 2-cent pieces	571,759.68		133.00	571,626.68
Nickel 3-cent pieces	657,837.53		336.00	657,501.53
Nickel 5-cent pieces	31,424,465.05	3,162,824.60	112,100.05	34,475,189.60
Total	55,186,779.25	4,241,117.20	134,322.34	59,293,574.11

Minor coins can be obtained from the Treasury and subtreasuries over the counter in exchange for other kinds of money, or they will

be shipped to depositors therefor at the expense of the consignee for transportation charges.

The shipments, by offices, for the past three fiscal years are set out in the annexed statement:

Offices.	Fiscal year—		
	1911	1912	1913
Washington	$103,210.80	$123,196.07	$114,758.20
Baltimore	53,095.00	54,820.00	55,600.00
Boston	164,190.00	160,430.00	142,905.00
Chicago	514,335.00	411,500.00	572,325.00
Cincinnati	268,660.05	272,256.00	267,141.00
New Orleans	189,820.00	209,385.00	224,270.00
New York	885,795.00	725,970.00	688,560.00
Philadelphia	341,820.00	328,375.00	336,325.00
St. Louis	333,510.00	247,434.00	291,526.00
San Francisco	90,630.00	77,350.00	68,386.00
Mint, Philadelphia	1,250,289.10	1,373,047.60	2,425,154.14
Mint, San Francisco	10.00	7,089.40	134,210.39
Mint, Denver		11,851.15	70,154.19
Total	4,195,364.95	4,002,704.22	5,391,313.92

TRANSFERS OF FUNDS FOR DEPOSITS MADE IN NEW YORK.

The cooperation of the Treasury is frequently requested by banking institutions in the transfer of large amounts of money between subtreasury cities, through the medium of the general account, to be used in the movement of crops or to meet other demands of business. These requests are granted when such transfers are not incompatible with the public interest.

The following table gives the deposits in New York in calendar years and the resultant payments in the several cities from 1908 to June 30, 1913:

Transactions.	Gold coin and certificates.	United States notes.	Silver dollars and certificates.	Total.
1908—Receipts	$4,025,779.00	$108,000.00	$100,000.00	$4,233,779.00
Paid by the Treasurer and assistant treasurers of the United States:				
Washington		400,000.00	200,000.00	600,000.00
Chicago	30,000.00			30,000.00
Denver mint	100,000.00			100,000.00
New Orleans	1,638,000.00	60,000.00	98,000.00	1,796,000.00
Philadelphia	5,000.00			5,000.00
San Francisco	1,702,779.00			1,702,779.00
Total	3,475,779.00	460,000.00	298,000.00	4,233,779.00
1909—Receipts	19,172,000.00	5,000.00		19,177,000.00
Paid by the Treasurer and assistant treasurers of the United States:				
Washington		450,000.00	100,000.00	550,000.00
Chicago	600,000.00			600,000.00
Cincinnati	200,000.00			200,000.00
New Orleans	615,000.00	55,000.00	257,000.00	927,000.00
San Francisco	16,900,000.00			16,900,000.00
Total	18,315,000.00	505,000.00	357,000.00	19,177,000.00
1910—Receipts	11,815,000.00			11,815,000.00
Paid by the Treasurer and assistant treasurers of the United States:				
Washington	400,000.00			400,000.00
New Orleans	3,146,000.00	780,000.00	129,000.00	4,055,000.00
San Francisco	7,360,000.00			7,360,000.00
Total	10,906,000.00	780,000.00	129,000.00	11,815,000.00
1911—Receipts	23,350,000.00			23,350,000.00

Transactions.	Gold coin and certificates.	United States notes.	Silver dollars and certificates.	Total.
Paid by the Treasurer and assistant treasurers of the United States:				
Washington	$400,000.00			$400,000.00
Chicago	10,000,000.00			10,000,000.00
Cincinnati	100,000.00			100,000.00
New Orleans	200,000.00			200,000.00
Philadelphia	900,000.00			900,000.00
San Francisco	11,750,000.00			11,750,000.00
Total	23,350,000.00			23,350,000.00
1912—Receipts	25,117,805.29			25,117,805.29
Paid by the Treasurer and assistant treasurers of the United States:				
Washington	400,000.00			400,000.00
New Orleans	4,220,000.00			4,220,000.00
Philadelphia	2,900,000.00			2,900,000.00
St. Louis	250,000.00			250,000.00
San Francisco	17,347,805.29			17,347,805.29
Total	25,117,805.29			25,117,805.29
1913—Receipts:				
In January	562,183.33			562,183.33
In February	126,775.00			126,775.00
In March	1,200,000.00			1,200,000.00
In April	700,000.00			700,000.00
In May	1,000,000.00			1,000,000.00
In June				
Total	3,588,958.33			3,588,958.33
Paid by the Treasurer and assistant treasurers of the United States:				
Cincinnati—				
In March	1,100,000.00			1,100,000.00
In April	500,000.00			500,000.00
Total	1,600,000.00			1,600,000.00
San Francisco—				
In January	562,183.33			562,183.33
In February	126,775.00			126,775.00
In March	100,000.00			100,000.00
In April	200,000.00			200,000.00
In May	1,000,000.00			1,000,000.00
Total	1,988,958.33			1,988,958.33
Aggregate	3,588,958.33			3,588,958.33

USE OF ORDER GOLD CERTIFICATES FOR EXCHANGE ON NEW YORK.

Previous to February 1, 1910, the banks in San Francisco, under provisions of existing law, exchanged gold coin at the Subtreasury for demand gold certificates of large denominations, which they sent by registered mail to their correspondents in New York, thus effecting a transfer of funds at small cost to the banks. The demand gold certificates were shipped from Washington to San Francisco by express at the rate of $1.75 per $1,000, while order gold certificates (incomplete) were sent by express in packages of $5,000,000 at a total coast of only $15.

In order to eliminate the expense of transporting demand certificates to San Francisco, and at the same time to grant to the banks in that city their rights under the law to deposit gold coin in exchange for gold certificates, it was deemed advisable to issue to said banks order gold certificates, series of 1900, and to make them payable by the assistant treasurer of the United States, New York. Under this plan an actual saving of expense was effected even if it should later become necessary to transport the gold coin so deposited to New York, because the transportation charge on gold coin from San

Francisco to New York is less than the charge on demand gold certificates from Washington to San Francisco. However, there is usually a "return movement" at certain seasons of the year, during which it becomes desirable on the part of banks to make deposits of funds in New York, and to have payments made therefor in gold coin at the Subtreasury in San Francisco.

The transactions, semiannually, since February, 1910, are recorded in the statement following:

Period.	Order gold certificates issued in San Francisco and redeemed in New York.	Deposits in New York for which payments were made in San Francisco.
1910—February to June, inclusive	$3,750,000	$2,650,000
July to December, inclusive	600,000	4,260,000
1911—January to June, inclusive	5,100,000	3,500,000
July to December, inclusive		8,250,000
1912—January to June, inclusive	3,000,000	10,418,566
July to December, inclusive	5,200,000	6,929,239
1913—January to June, inclusive	2,900,000	1,988,958
Aggregate	20,550,000	37,996,763

It will be observed that the deposits made in New York on account of the return movement are $17,446,763 in excess of the payments made for gold certificates issued at San Francisco. This method of using the order certificates is in the interest of good administration, and has made it possible to discontinue the shipments of demand gold certificates from Washington to San Francisco, with a resultant saving of transportation charges.

DEPOSITS OF GOLD BULLION AT MINTS AND ASSAY OFFICES IN THE FISCAL YEARS 1912 AND 1913.

Under the provisions of an act of Congress approved March 2, 1911, the new product of our gold mines and all imports of gold may be deposited in the mints and assay offices, for which the full value thereof will be paid, either in coin or by check on the Treasurer of the United States, and against the gold so deposited and paid for, the Secretary of the Treasury may, in his discretion, issue gold certificates.

The new product of the mines or original deposits of gold bullion at the mints and assay offices during the fiscal years 1912 and 1913 may be observed in the statement following:

Office.	1912	1913
Philadelphia	$1,619,039.16	$1,493,553.40
San Francisco	53,864,397.23	54,101,615.95
Denver	20,330,523.60	21,075,876.26
New York	52,921,293.75	65,612,158.65
New Orleans	1,394,110.89	897,328.15
Carson	997,917.63	724,853.37
Helena	1,815,788.13	1,495,788.35
Boise	870,145.44	1,008,940.29
Charlotte	78,356.86	29,244.45
Deadwood	7,592,261.74	7,290,951.52
Seattle	5,818,676.64	4,951,640.57
Salt Lake City	1,122,600.67	595,520.36
Total	148,425,111.74	159,277,471.32

SHIPMENTS OF CURRENCY FROM WASHINGTON.

During the fiscal year 1913 the currency distributed from the Treasury in Washington to the subtreasuries and to banks amounted to $882,677,335, against $761,847,077 during the preceding 12 months. In 1912, 17,822 packages were sent by registered mail and 97,596 by express, while in 1913, 18,971 went by registered mail and 106,073 by express.

The transactions during the past two fiscal years are compared in the statement following:

	Fiscal year 1912.		Fiscal year 1913.	
	Number of packages.	Amount.	Number of packages.	Amount.
Total by express	97,596	$758,634,665	106,073	$878,703,859
Total by registered mail	17,822	3,212,412	18,971	3,973,476
Aggregate	115,418	761,847,077	125,044	882,677,335

RECOINAGE IN THE FISCAL YEAR 1913.

Gold coins presented for payment or deposit on any account at the Treasury offices are weighed in, and the pieces that are too light for further circulation are segregated for transmission to the mint. The subsidiary silver coins and minor coins received are assorted, and the pieces that are unfit for circulation are set aside for similar disposition. The gold coins sent to the mint for recoinage during the fiscal year 1913 amounted to $912,799, the silver coins to $407,075, and the minor coins to $134,284.

The face value in each case, and the loss in gold, silver, and minor coin, respectively, are set forth for the past two fiscal years in the subjoined table:

	Fiscal year 1912.		Fiscal year 1913.	
	Face value.	Loss.	Face value.	Loss.
Double eagles	$487,560.00	.....	$169,840.00	.....
Eagles	721,860.00	.....	246,250.00	.....
Half eagles	1,227,860.00	.....	491,300.00	.....
Quarter eagles	9,867.50	.....	5,350.00	.....
Three-dollar pieces	18.00	.....	15.00	.....
One-dollar pieces	30.00	.....	44.00	.....
Total gold	2,447,195.50	$4,848.09	912,799.00	$8,470.62
Half dollars	196,157.00	.....	113,595.00	.....
Quarter dollars	215,572.50	.....	147,146.25	.....
Twenty-cent pieces	63.60	.....	10.20	.....
Dimes	261,968.80	.....	145,878.70	.....
Half dimes	954.90	.....	400.30	.....
Three-cent pieces	70.47	.....	44.55	.....
Total silver	674,787.27	44,321.70	407,075.00	26,247.01
Minor coins	131,926.50	9,186.49	134,284.00	6,941.41
Aggregate	3,253,909.27	58,356.28	1,454,158.00	41,659.04

REDEMPTION OF NATIONAL-BANK NOTES.

There has been a constant increase in redemptions of national-bank notes for a number of years past and during the fiscal year 1913 the amount presented was $675,889,000, 90.01 per cent of the average

circulation outstanding, and was $25,934,289 more than the largest amount previously received during a year, which was in 1912. Of the total received, 47.62 per cent was sent by banks in New York City. The number of remittances was 46,703, and these contained 69,832,398 notes. The average value of notes presented was $9.62, while that of the outstanding was $10.20. Of the average amount of $5 notes outstanding, 104.26 per cent was redeemed; of the $10 notes, 93.28 per cent; of the $20 notes, 80.18 per cent; of the $50 notes, 73.53 per cent; and of the $100 notes, 61.80 per cent. The receipts for the first six months of the fiscal year, July to December, were 44.74 per cent of the total, and those for the last six months, January to June, 55.26 per cent. The largest amount presented during a month was $79,753,664 in January, and the smallest $41,816,565 in September.

Payment was made for notes received as follows: By Treasurer's checks to the amount of $230,238,151, by remittances of $352,869,976 in new United States currency, by remittances of $122,710 in gold, silver, and minor coin, and by credit of $89,891,431 in various accounts.

Notes assorted and delivered during the year amounted to $669,405,645.50. Of this sum $218,884,750 was fit for use and was forwarded by express to banks of issue in 143,257 packages; the remainder was unfit for use and was delivered to the Comptroller of the Currency, $426,431,860 for destruction and reissue, in 218,754 packages, and $24,089,035.50 for destruction and retirement, in 13,277 packages.

Owing to heavy redemptions the amount of notes on hand exceeded the balance in the 5 per cent fund, except during portions of the months of December and January, and the Treasury advanced payment out of the general fund as the notes were received. The largest amount advanced at one time was $23,914,635.44, on January 18, 1913. As the redemptions were greater during 1913 than 1912, the condition during 1913 was an improvement over that of the previous year, when the 5 per cent fund was at no time equal to the demands made upon it, and the largest advance at one time was $3,000,000 more than on the above date.

The expenses of redemption, amounting to $517,842.93, have been assessed upon the banks in proportion to their notes redeemed at the rate of $0.77293 per $1,000.

SPURIOUS ISSUES DETECTED IN 1913.

The counterfeit coins and paper currency detected at the Treasury during the past fiscal year were $1,569.20 less in face value than in the 12 months preceding.

Comparison, by items, for the past three fiscal years follows:

Kinds.	1911	1912	1913
United States notes	$3,796.00	$3,934.00	$2,641.00
Treasury notes of 1890	74.00	27.00	54.00
Gold certificates	150.00	20.00	470.00
Silver certificates	723.00	850.00	1,308.00
National-bank notes	3,978.00	3,279.00	2,106.00
Gold coin	333.00	324.00	462.50
Silver coin	3,075.00	3,118.45	3,063.35
Minor coin	385.61	157.81	403.36
Fractional currency	153.30	106.85	189.70
Compound-interest notes	200.00	500.00	50.00
Total	12,867.91	12,317.11	10,747.91

SPECIAL TRUST FUNDS.

The Treasurer of the United States is custodian of several special trusts, consisting of bonds and other obligations, which are held under provisions of law or by direction of the Secretary of the Treasury.

The kinds of bonds or obligations held on each account and transactions therein during the past fiscal year are recorded in the subjoined statement:

Account and kinds.	Held June 30, 1912.	Fiscal year 1913		Held June 30, 1913.
		Deposited.	Withdrawn.	
State bonds belonging to the United States:				
Louisiana State bonds	$37,000.00			$37,000.00
North Carolina State bonds	58,000.00			58,000.00
Tennessee State bonds	335,666.66⅔			335,666.66⅔
United States bonds held under special provisions of law: Manhattan Savings Institution	75,000.00			75,000.00
Held for the Secretary of War: Captured bonds of the State of Louisiana	545,480.00			545,480.00
Held for the Secretary of the Treasury: Panama R. R. notes	3,247,332.11			3,247,332.11
Held for the District of Columbia:				
Bonds for account of District contractors	197,680.00	$14,550.00	$55,870.00	156,360.00
Chesapeake & Ohio Canal bonds	84,285.00			84,285.00
Board of audit certificates	20,134.72			20,134.72
Held for the board of trustees. Postal Savings System: Postal savings bonds	5,460.00	112,000.00		117,460.00
Total	4,606,038.49⅔	126,550.00	55,870.00	4,676,718.49⅔

The General Assembly of the State of Louisiana in July, 1912, passed a joint resolution proposing an amendment to the constitution of the State, authorizing the board of liquidation of the State debt to create a sinking fund and to provide for the payment in full out of the first surplus accruing in the sinking fund the amount of principal and interest due on the bonds of the State, the face value of which aggregates $37,000, and which are held by the United States as trustee for certain Indian funds. This proposition was submitted to the qualified electors of the State and was ratified by them at the general election on November 5, 1912.

The State of North Carolina has authorized and appointed commissioners to take under consideration a plan for settling the indebtedness of that State to the United States, but Congress postponed action on a measure providing for representatives on the part of the Government.

Commissioners representing the Government and the State of Tennessee, under provisions of law, have now under consideration a plan for settling with that State. It is apparent that some progress has been made toward a settlement with the three States named in the foregoing for the unpaid matured bonds of those States belonging to the United States.

The bonds held for the Manhattan Savings Institution are in trust for that institution as indemnity for certain stolen bonds, as provided by act of December 19, 1878 (20 Stat., 589), and will be held for such time as, in the judgment of the Secretary of the Treasury, will secure the Treasurer of the United States against loss.

Recommendation has been made to Congress for authority to return to the State of Louisiana the bonds of that State captured at

Shreveport by the Union forces during the War of the Rebellion, now held as a special deposit by the Secretary of War.

The special trust held for the Secretary of the Treasury is composed of notes of the Panama Railroad Co. drawing 4 per cent interest payable to the United States, and is security for money advanced for the equipment and construction of said railroad.

The special trust held for the District of Columbia represents, first, the moneys retained from contractors under provisions of law and invested at the request and risk of said contractors, and, second, obligations that belong to the District of Columbia.

The special trust held for the board of trustees, Postal Savings System, consists wholly of postal savings bonds, representing investments made by said board, as described on page 209.

DISTRICT OF COLUMBIA.

The transactions of the Treasurer of the United States, ex officio commissioner of the sinking fund of the District of Columbia, pertaining to the affairs of the District are fully set forth in a separate report.

During the fiscal year 1913 the funded debt retired amounted to $647,700, resulting in the reduction of the annual interest charge by $23,641.05.

On July 1, 1878, when the Treasurer was charged with the duties of the late commissioners of the sinking fund of the District of Columbia, the bonded debt was $22,106,650; since that date 3.65 per cent bonds have been issued, amounting to $1,254,050, making a total debt of $23,360,700. This sum has been decreased by the operation of the sinking fund and otherwise $15,749,850, leaving outstanding July 1, 1913, $7,610,850 of bonds bearing 3.65 per cent interest.

The annual interest charge on July 1, 1878, was $1,015,759.12 and on July 1, 1913, $277,796.02, showing a reduction of $737,963.10.

The retentions from 30 contracts with the District of Columbia were canceled during the year by the return to the contractors of $44,020 in bonds and $24,307.70 in cash.

At the close of the fiscal year the 10 per cent guaranty fund held for account of contracts amounted to $252,808.18 and is represented by $157,010 in bonds purchased at the request and risk of contractors and $90,143.35 uninvested cash.

The securities of the District in the care and custody of the Treasurer are:

Bonds for account of contractors	[1] $157,010.00
Chesapeake & Ohio Canal bonds	84,285.00
Board of audit certificates	20,134.72
Total	261,429.72

LEGISLATION RECOMMENDED.

It is suggested that recommendation to Congress be made in such form as may be deemed advisable for legislation that will authorize favorable action on the following subjects:

1. *Gold certificates for $5.*—There is necessity for increasing the resources of the Treasury for the issue of small denominations of cur-

[1] Of which $650 was received and sent to the office of the Secretary for transfer, but was not placed in the custody of the Treasurer until July 1, 1913.

rency. It is believed that the issue of gold certificates for $5 instead of restricting the issue as now to $10 and above will enable the department to respond to the demands for small denominations.

2. *Increased facilities for exchanging worn and defaced United States paper currency for new.*—There is a constant and widespread interest which advocates a cleaner and more sanitary currency. The sentiment is a laudable one and should be attainable, because the expense is but a trifle as compared with the beneficent results. The Government can well afford to replace its paper issues when unfit for circulation.

3. *Increase of the 5 per cent bank-note redemption fund.*—Experience shows that the 5 per cent redemption fund is not adequate for the purposes intended. For the greater part of the last fiscal year the Treasury had to advance money for the redemption of bank notes on the security of the notes themselves. As the notes are not obligations of the Treasury, the banks should be required to deposit a greater amount to provide for current redemptions.

4. *Restriction on amount of $5 bank notes.*—It appears that national banks located in commercial centers are not disposed to issue the full amount of $5 notes authorized by law, while the banks located in the interior or outlying sections of the country would largely increase the amount of their $5 notes but for the limitation by statute. Therefore it is believed that the repeal or modification of the provision limiting the $5 notes to one-third in amount of the circulating notes of national banks would be the means of increasing the amount of such notes in circulation, and would accordingly reduce the demand upon the Treasury for United States paper currency of small denominations.

5. *Removing limit on weight of registered package.*—It is believed that the removal of the limit on the weight of a package which may be sent through the registered mail of the United States would facilitate a greater use of this method of transportation; and if followed by an enactment that will authorize the transportation of paper currency to and from the Treasury or between Treasury offices by registered mail insured, it would be in the interest of economical administration.

Upon the termination of the administration of Hon. Carmi A. Thompson, March 31, 1913, the duties of the office of Treasurer of the United States devolved upon the present incumbent.

The transfer involved an examination of the moneys, securities, and other evidences of value that came into the Treasurer's immediate charge, amounting to $1,426,422,051.48⅔. The examination was concluded April 8, 1913, and the report of the committee in charge gave the most satisfactory assurance that the funds transferred were absolutely correct and in agreement with the accounts.

This result is undoubtedly the best comment on the zeal and active interest which the staff, chiefs of divisions, clerks of every grade, and every person employed in the office have taken in the performance of their responsible duties.

Respectfully,

JOHN BURKE,
Treasurer.

Hon. WILLIAM G. MCADOO,
Secretary of the Treasury.

REPORT OF THE COMPTROLLER OF THE CURRENCY.

TREASURY DEPARTMENT,
OFFICE OF COMPTROLLER OF THE CURRENCY,
Washington, D. C., December 1, 1913.

SIR: In conformity with the requirements of section 333 of the Revised Statutes of the United States, the fifty-first annual report of the operations of the Currency Bureau for the year ended October 31, 1913, is herewith submitted.

CONDITION OF NATIONAL BANKS.

The operations of the national banks as reflected in detail by the resources and liabilities of the banks at date of the periodical calls during the current year are exhibited in the following table:

Abstract of reports of condition of national banks from Nov. 26, 1912, to Aug. 9, 1913.

	Nov. 26, 1912—7,420 banks.	Feb. 4, 1913—7,425 banks.	Apr. 4, 1913—7,440 banks.	June 4, 1913—7,473 banks.	Aug. 9, 1913—7,488 banks.
RESOURCES.					
Loans and discounts	$6,058,982,029.40	$6,125,029,165.90	$6,178,096,379.33	$6,143,028,132.94	$6,168,555,525.30
Overdrafts	26,493,061.24	22,307,066.94	20,077,156.00	19,006,152.02	18,377,993.11
U. S. bonds to secure circulation	728,482,810.00	730,754,970.00	730,424,030.00	735,226,870.00	735,809,330.00
U. S. bonds to secure U. S. deposits	46,165,400.00	47,406,310.00	47,598,470.00	47,061,690.00	47,694,115.00
Other bonds to secure U. S. deposits	33,029,494.25	34,742,462.12	37,524,380.29	43,597,929.58	55,484,073.54
U. S. bonds on hand	7,737,060.00	6,135,370.00	7,898,870.00	6,338,000.00	6,519,838.00
Premiums on U. S. bonds	7,059,551.81	6,722,651.98	7,014,837.88	6,876,636.89	6,605,248.13
Bonds, securities, etc.	1,036,942,064.36	1,043,943,884.13	1,051,481,767.28	1,050,587,655.55	1,040,422,273.43
Banking house, furniture, and fixtures	245,796,890.28	246,629,609.78	248,570,244.17	248,888,953.95	252,339,399.24
Other real estate owned	29,078,950.21	32,070,676.15	31,984,222.55	31,332,948.16	31,229,535.17
Due from national banks (not reserve agents)	477,181,532.05	473,496,114.13	451,758,116.35	439,021,200.04	408,921,998.34
Due from State banks and bankers	218,289,353.55	209,294,468.18	194,311,338.05	194,990,066.54	192,214,416.82
Due from approved reserve agents	786,190,805.24	850,478,400.05	808,364,504.79	762,176,994.73	769,213,605.45
Checks and other cash items	34,100,567.74	36,722,041.76	32,680,725.17	37,092,245.76	29,860,355.62
Exchanges for clearing house	278,672,040.53	288,820,252.73	249,893,991.16	257,560,492.57	123,507,291.21
Bills of other national banks	46,118,234.00	49,747,626.00	47,751,533.00	51,538,808.00	42,637,771.00
Fractional currency, nickels, and cents	3,300,300.97	3,782,668.19	3,895,212.41	3,580,482.68	3,650,042.38
Gold coin	149,551,166.85	152,044,736.80	147,312,673.53	143,762,658.50	143,308,791.61
Gold Treasury certificates	286,876,170.00	342,321,240.00	310,979,210.00	323,619,310.00	337,082,500.00
Gold Treasury certificates (sec. 5192)	90,220,000.00	88,407,500.00	93,263,000.00	89,443,500.00	85,726,700.00
Silver dollars	11,968,302.00	13,955,348.00	13,625,311.00	13,720,873.00	12,322,675.00
Silver Treasury certificates	125,183,709.00	131,692,580.00	127,352,808.00	133,339,825.00	131,052,874.00
Silver fractional coin	18,521,373.86	21,310,443.33	20,373,397.42	20,188,461.27	18,773,916.88
Specie	682,320,721.71	749,731,848.13	712,906,399.95	724,074,627.77	728,267,457.49
Legal-tender notes	176,778,016.00	183,685,383.00	175,377,336.00	189,908,013.00	170,901,917.00
Five per cent redemption fund	35,486,273.80	34,988,720.82	35,020,010.39	35,394,885.00	35,596,823.12
Due from Treasurer United States	7,583,460.54	9,109,576.42	9,394,808.69	9,636,971.86	9,043,334.23
Total	10,965,788,617.68	11,185,599,266.47	11,081,974,333.46	11,036,919,757.04	10,876,852,343.58

Abstract of reports of condition of national banks from Nov. 26, 1912, to Aug. 9, 1913—Continued.

	Nov. 26, 1912—7,420 banks.	Feb. 4, 1913—7,425 banks.	Apr. 4, 1913—7,440 banks.	June 4, 1913—7,473 banks.	Aug. 9, 1913—7,488 banks.
LIABILITIES.					
Capital stock paid in	$1,045,092,580.00	$1,048,899,055.00	$1,052,265,581.53	$1,056,919,792.00	$1,056,345,786.00
Surplus fund	701,999,833.53	717,261,016.39	719,673,812.36	720,606,792.54	725,333,629.03
Undivided profits, less expenses and taxes	268,007,255.44	241,828,956.12	255,387,230.68	268,140,962.57	259,549,156.80
National-bank notes outstanding	721,502,185.50	717,467,661.50	718,976,684.00	722,125,024.00	724,459,849.00
State-bank notes outstanding	27,701.00	27,701.00	27,701.00	[1]22,415.00	27,701.00
Due to other national banks	1,050,499,032.91	1,140,270,695.02	1,078,165,210.58	1,017,460,873.04	1,008,252,803.55
Due to State banks and bankers	542,198,410.84	578,390,641.93	562,561,795.33	528,264,904.42	545,395,503.07
Due to trust companies and savings banks	465,308,937.81	547,774,013.99	510,828,398.62	528,940,184.47	515,379,163.06
Due to approved reserve agents	43,799,304.63	44,154,947.07	40,790,134.91	45,885,609.76	39,522,941.44
Dividends unpaid	1,035,738.63	1,908,940.52	2,808,131.27	1,529,195.57	1,596,856.68
Individual deposits subject to check	4,862,501,434.67	4,900,574,262.93	4,884,040,174.94	4,866,181,398.63	4,753,750,004.82
Demand certificates of deposit	411,213,063.74	412,711,845.19	415,247,831.52	418,661,677.79	413,742,420.96
Time certificates of deposit	502,592,927.91	508,352,894.52	514,170,059.46	525,508,864.56	533,364,588.29
Certified checks	105,976,253.62	89,111,787.50	84,498,699.30	80,823,835.00	19,098,956.16
Cashiers' checks outstanding	62,277,389,97	74,681,505.48	70,830,279.82	62,285,775.14	41,382,761.54
Individual deposits, total	5,944,561,069.91	5,985,432,295.62	5,968,787,045.04	5,953,461,551.12	5,761,338,731.77
United States deposits	33,594,143.22	39,360,041.72	39,886,857.14	43,118,218.05	51,486,660.10
Postal-savings deposits	15,649,315.87	17,008,709.60	17,687,643.16	18,661,875.47	19,790,320.55
Deposits of U. S. disbursing officers	12,692,478.24	6,664,962.19	6,316,019.43	6,606,821.08	5,817,638.82
Bonds borrowed	38,774,688.78	39,573,476.06	42,183,544.32	43,215,465.58	43,831,830.04
Notes and bills rediscounted	10,776,272.59	8,001,091.18	8,319,078.73	14,080,980.36	17,710,480.22
Bills payable	61,105,295.55	43,446,507.41	48,213,459.82	58,825,794.92	91,396,090.35
Reserved for taxes	7,447,975.40	4,749,175.46	5,724,293.54	7,030,644.10	7,434,272.79
Liabilities other than those above stated	1,716,397.83	3,379,378.69	3,371,712.00	2,022,652.99	2,182,929.31
Total	10,965,788,617.68	11,185,599,266.47	11,081,974,333.46	11,036,919,757.04	10,876,852,343.58

[1] $5,286, charged off by a bank, subsequently restored.

In reviewing the condition of national banks as shown by the periodical returns it is of interest to note the general situation, particularly in respect of the public debt, the interest charge thereon, operations of the clearing houses, prices for money, foreign trade as represented by imports and exports, including transactions in the precious metals, and the returns to shareholders in dividends on their bank stock.

The indebtedness of the Government, less cash in the Treasury, on June 30, 1913, was $1,028,344,055, of which $965,706,610 was interest-bearing, the annual interest charge being $22,835,330, averaging 2.36 per cent. The circulating medium, consisting of specie, legal tenders, and national-bank notes, was $3,720,070,016, of which $356,331,567 is the amount held in the United States Treasury, the remainder, $3,363,738,449, being in circulation. Based on the estimated population of continental United States on June 30, the per capita of money in circulation was $34.56. Of the amount in circulation, 46.2 per cent is included in the assets of national, State, and private banks, leaving 53.8 per cent with the public at large.

The transactions of the clearing houses of the United States, as represented by the volume of clearings, reached $173,765,288,000, exceeding the operations of the prior year by $5,564,362,000

Foreign commerce in merchandise aggregated $4,278,862,383, the exports amounting to $2,465,884,149, the imports to $1,812,978,235, or less by $652,905,915 than the volume of exports. Foreign trade for the year exceeded the volume in 1912 by $421,275,040. In addition to the trade in merchandise, gold was exported to the amount of $77,762,622, or $8,568,597 in excess of the imports. Silver exports amounted to $71,614,311, or $30,345,795 in excess of the imports. Thus the exports of gold and silver combined exceeded the imports of these metals for the year by $38,914,392.

Money has been firm generally and in the New York market rates for both time loans and commercial paper ruled higher than in any year since 1907.

Based on capital and surplus, the gross earnings of national banks during the year were greater by over 2 per cent than during the prior year. While there has been a notable depreciation in the market value of standard and other securities, necessitating a cut in the undivided profit account of the banks, shareholders of national banks received dividends at the average rate of 11.4 per cent as against an average of 11.01 per cent for the prior five years.

In connection with information relative to the operation of national banks, elsewhere in this report are submitted statistics relating to the condition of some 18,500 State and private banks from which returns were received for June last. The capital of national and other banking institutions is shown to amount to $2,096,800,000, of which slightly more than one-half is the capital of national banks. Of individual deposits aggregating $17,475,700,000, national banks held approximately one-third, and of the total assets, stated at $25,712,100,000, approximately two-fifths are those of national banks.

In the introductory table of this report is shown the condition of national banks as represented by their assets and liabilities in detail at date of each return from November 26, 1912, to August 9, 1913. The number of banks reporting increased during the period in question from 7,420 to 7,488. While the aggregate amount of assets reached the maximum—$11,185,599,266—on February 4, the returns on April 4 show a decline of $103,624,933, a further decline of $45,054,576 by June 4, and $160,067,413 by August 9. Hence between February 4 and August 9 there was a decrease in assets of $308,746,922.

Loans and discounts standing at $6,058,982,029 in November, 1912, increased to $6,178,096,379 on April 4 of the current year, decreased to $6,143,028,132 on June 4, but rose to $6,168,555,525 on August 9.

United States bonds on deposit to secure circulation were lowest at the beginning of the year, viz, $728,482,810, and at the maximum, $735,809,330 at the close of the year, a net increase of $7,326,520. Including with bonds to secure circulation, those pledged as security for public deposits and those held in bank, the investment of national banks in United States bonds increased from $782,385,270 in November, 1912, to $790,023,283 at the close of the year, the total investment in securities of this character showing an increase of $7,638,013. These amounts are exclusive of the premiums on the

bonds, which at the beginning of the year were stated at $7,059,551, and at the close of the year at $6,605,248.

Investments in bonds and securities other than those issued by the Government amounted in November, 1912, to $1,069,971,558, a slight increase being shown at the date of each subsequent call to August 9, when the amount reported was $1,095,906,346, an increase during the period of $25,934,788.

Specie and other lawful money in bank was at the minimum in November, 1912, amounting on that date to $859,098,737, with an increase to the high point of $933,417,231 on February 4. Between this date and the April call there was a drop of some $45,000,000, or to $888,283,735. The banks recovered in lawful money between the last-named date and June 4 over $25,000,000, the amount held on the latter date being $913,982,640. On August 9 the cash holdings had fallen to $899,169,374, or $34,300,000 less than in February, but $4,000,000 more than at the date of the corresponding returns in 1912.

Paid-in capital stock increased from $1,045,092,580 in November, 1912, to $1,056,919,792 in June, 1913, but on the August call had declined to $1,056,345,786, but the net increase for the year was $11,253,206. Capital and surplus combined showed a steady increase from $1,747,092,413 to $1,781,679,415, the increase, roundly stated, being $34,600,000. Combining net undivided profits with capital and surplus, funds representing shareholders' interest in the banks, it is noted that these funds increased during the year approximately $26,000,000, or from $2,015,099,668 in November, 1912, to $2,041,228,571 at the close of the current year.

Individual deposits reached the maximum on February 4, amounting on that date to $5,985,432,295, but declined at the close of the year to $5,761,338,731, a decrease of $224,093,564.

United States deposits, including disbursing officers' accounts and postal savings deposits, showed an increase at date of each report during the year, beginning at $61,935,937 and closing with $77,094,619, the net increase being approximately $15,000,000.

Rediscounts and bills payable, amounting to $71,881,568 in November, 1912, declined to $51,447,598 on February 4, the low point during the year; increased to $56,532,538 in April, to $72,906,775 in June, and to $109,106,570 in August.

What is characterized as banking power, that is capital, surplus, and other profits, deposits and circulation of national banks, based on the periodical reports for the year, averaged $8,748,026,626, or $1,177,234 per bank.

LOANS AND DISCOUNTS OF NATIONAL BANKS.

In connection with periodical statements relating to the assets and liabilities of national banks, each report states in detail the amount and character of loans. The variations in proportions are not notable. Statistics herewith presented are based upon returns for comparable dates in June during the past three years. As will be noted, the paper is divided into two general classes, demand and time, and the former subdivided into paper with one or more individual or firm names, and paper secured by stocks, bonds,

and other collateral. Time paper is shown in three classes: first, that with two or more individual or firm names; single name (one person or firm), without other security; and third, paper secured by stocks and bonds and other personal security, including liens on real estate. From June 7, 1911, to June 4, 1913, the volume of loans increased from $5,610,838,787 to $6,143,028,133. On June 4 last 25.8 per cent of the banks' loans was demand, and 74.2 per cent time paper. Of this class 33.1 per cent represents time paper with two or more individual or firm names, the single name time paper being 20.5 per cent, and time paper secured by stocks, bonds, etc., 20.6 per cent.

In the following table are shown the changes in amounts and percentages of the various classes of paper in June 1911, 1912, and 1913:

Class.	June 7, 1911.		June 14, 1912.		June 4, 1913.	
	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
On demand, paper with one or more individual or firm names	$529,732,999	9.4	$571,345,681	9.6	$603,735,269	9.8
On demand, secured by stocks, bonds, and other personal securities	953,751,600	17.0	985,421,576	16.6	980,989,427	16.0
On time, paper with two or more individual or firm names	1,885,135,321	33.6	1,973,453,245	33.1	2,032,569,547	33.1
On time, single-name paper (one person or firm) without other security	1,124,716,389	20.0	1,198,505,689	20.1	1,261,484,534	20.5
On time, secured by stocks, bonds, and other personal securities, or on mortgages or other real-estate security	1,117,502,478	20.0	1,225,178,240	20.6	$1,264,249,356	20.6
Total	5,610,838,787	100.0	5,953,904,431	100.0	6,143,028,133	100.0

The distribution and proportion of loans and discounts in the banks of New York, in all central reserve cities, other reserve cities, and in country banks are shown in the accompanying table:

Banks in—	Loans.					
	June 7, 1911.		June 14, 1912.		June 4, 1913.	
	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
New York	$903,566,433	16.1	$959,068,755	16.1	$886,966,804	14.4
New York, Chicago, St. Louis	1,338,814,875	23.8	1,409,950,769	23.6	1,315,735,177	21.4
Other reserve cities	1,496,311,535	26.7	1,580,419,537	26.5	1,640,317,608	26.7
All reserve cities	2,835,126,410	50.5	2,990,370,306	50.1	2,956,052,785	48.1
Country	2,775,712,377	49.5	2,963,534,125	49.9	3,186,975,348	51.9
Total	5,610,838,787	100.0	5,953,904,431	100.0	6,143,028,133	100.0

As about 15 per cent of the loans of all national banks are made by banks located in the city of New York, the following statement is

of interest as showing the amount and character of loans by banks in that city on comparable dates in 1908 to 1910, and also in 1911, 1912, and 1913.

Loans and discounts.	Sept. 23, 1908, 37 banks.	Sept. 1, 1909, 38 banks.	Sept. 1, 1910, 39 banks.	June 7, 1911, 40 banks.	June 14, 1912, 37 banks.	June 4, 1913, 36 banks.
On demand, paper with one or more individual or firm names	$6,800,529	$7,708,853	$9,948,094	$9,356,484	$17,796,847	$13,486,717
On demand, secured by stocks, bonds, and other personal securities	374,548,964	385,430,495	328,145,065	331,736,688	326,897,301	302,904,035
On time, paper with two or more individual or firm names	146,194,094	145,989,671	176,608,890	177,331,562	171,791,524	178,030,288
On time, single-name paper (one person or firm), without other securities	132,737,553	163,098,915	170,708,005	197,030,419	219,172,889	189,754,147
On time, secured by stocks, bonds, and other personal securities, or on real-estate mortgages or other liens on realty	245,372,335	223,425,689	188,470,806	188,111,280	223,410,194	202,791,617
Total	905,653,475	925,653,623	873,880,860	903,566,433	959,068,755	886,966,804

The amount and class of loans of all national banks on approximate dates in 1902 to 1910 and 1911 to 1913 are shown in the following table:

Date.	Number of banks.	On demand, paper with one or more individual or firm names.	On demand, secured by stocks, bonds, and other personal securities.	On time, paper with two or more individual or firm names.	On time, single-name paper (one person or firm), without other security.	On time, secured by stocks, bonds, and other personal securities, or on mortgages or other real-estate security.	Total.
		Millions.	*Millions.*	*Millions.*	*Millions.*	*Millions.*	*Millions.*
Sept. 15, 1902	4,601	$237.3	$706.9	$1,176.4	$517.1	$642.4	$3,280.1
Sept. 9, 1903	5,042	283.1	717.3	1,267.5	558.1	655.4	3,481.4
Sept. 6, 1904	5,412	279.8	818.9	1,316.7	611.0	699.7	3,726.2
Aug. 25, 1905	5,757	320.1	854.1	1,382.2	689.1	753.0	3,998.5
Sept. 4, 1906	6,137	374.7	828.0	1,502.0	776.1	818.1	4,299.0
Aug. 22, 1907	6,544	428.2	832.9	1,648.7	899.5	869.2	4,678.5
Sept. 23, 1908	6,853	395.9	922.7	1,582.4	852.1	997.5	4,750.6
Sept. 1, 1909	6,977	441.5	957.3	1,698.4	971.5	1,060.1	5,128.8
Sept. 1, 1910	7,173	524.3	939.1	1,842.5	1,068.3	1,093.0	5,467.2
June 7, 1911	7,277	529.7	953.8	1,885.1	1,124.7	1,117.5	5,610.8
June 14, 1912	7,372	571.3	985.4	1,973.4	1,198.5	1,225.3	5,953.9
June 4, 1913	7,473	603.7	980.9	2,032.6	1,261.5	1,264.3	6,143.0

LOANS MATURING IN 90 DAYS OR LESS.

In addition to the usual information submitted by national banks in relation to the amount and character of their loans, national banks were requested to segregate and report the amount of their loans

maturing in 90 days or less, from August 9, 1913. The information desired was given by 7,096 of the 7,488 banks in operation on that date. Of the total volume of loans of the reporting banks, stated at $6,022,406,597, the paper running for 90 days or less aggregated $3,428,055,157, or 56.92 per cent. Of this short-time paper, 18½ per cent is on demand.

In the following statement is shown the amount of demand paper, together with time paper of each class maturing in 90 days from the date in question:

Classes.	Loans maturing in 90 days or less.
A. On demand (one or more names)	$252,144,881
B. On demand, secured by stocks, bonds, etc	384,583,183
C. On time (two or more names)	1,294,695,469
D. On time, single name, without other security	773,791,174
E. On time, secured by stocks, bonds, etc	701,409,037
F. Secured by real-estate mortgages, etc	21,431,413
Total	3,428,055,157
Maturing in over 90 days	2,594,351,440
Total	6,022,406,597

For the purposes of comparison with the foregoing general statement, there is submitted herewith information relating to the amount of each character of paper maturing in 90 days from August 9, and the aggregate of all other paper reported by national banks in each of the three central reserve cities, in other reserve cities, and by country banks:

Loans maturing in 90 days or less from August 9, 1913.

	New York, 36 banks.	Chicago, 9 banks.	St. Louis, 7 banks.	Central reserve cities 52 banks.
A. On demand (one or more names)	$7,004,989	$6,196,249	$2,412,125	$15,613,363
B. On demand, secured by stocks, bonds, etc	128,361,990	19,759,293	5,276,533	153,397,816
C. On time (two or more names)	125,527,742	73,754,071	23,814,102	223,095,915
D. On time, single name, without other security	116,686,948	52,386,018	11,096,501	180,163,467
E. On time, secured by stocks, bonds, etc	121,086,821	44,740,103	20,025,680	185,852,604
F. Secured by real-estate mortgages, etc	303,812	208,864	12,951	525,627
Maturing in 90 days or less	498,966,302	197,044,598	62,637,892	758,648,792
Maturing in over 90 days	437,942,142	131,979,772	46,524,081	616,445,995
Total	936,908,444	329,024,370	109,161,973	1,375,094,787

	Other reserve cities, 308.	Country banks, 6,736.	Total banks in United States, 7,096.
A. On demand (one or more names)	$79,186,557	$157,344,961	$252,144,881
B. On demand, secured by stocks, bonds, etc	107,692,020	123,493,347	384,583,183
C. On time (two or more names)	305,571,196	766,028,358	1,294,695,469
D. On time, single name, without other security	243,326,078	350,301,629	773,791,174
E. On time, secured by stocks, bonds, etc	194,391,557	321,164,876	701,409,037
F. Secured by real-estate mortgages, etc	3,647,050	17,258,736	21,431,413
Maturing in 90 days or less	933,814,458	1,735,591,907	3,428,055,157
Maturing in over 90 days	639,924,756	1,337,980,689	2,594,351,440
Total	1,573,739,214	3,073,572,596	6,022,406,597

RESERVES OF NATIONAL BANKS.

Under the provisions of the act of May 30, 1908, national banks are exempted from maintaining a reserve against United States deposits, which are held to include not only deposits made by direction of the Secretary of the Treasury, but deposits of United States disbursing officers and postal savings funds, that is, all Government accounts upon which interest is paid. In computing the reserve required and held, to the net amount due to national and other banks is added dividends unpaid and individual deposits, and from the gross amount so obtained the following deductions are made: Checks on other banks in the same place, exchanges for clearing houses, and national-bank notes. The remainder is the amount upon which the required 25 or 15 per cent reserve is determined. The 5 per cent redemption fund is then deducted, leaving the net reserve required to be held. Under the law, national banks located in the central reserve cities are required to maintain a reserve of 25 per cent, all of which must be held in bank. The same percentage of reserve is required for other reserve city banks, but one-half of the amount required may be deposited with correspondents, in the central reserve cities. The country bank requirement is 15 per cent, of which two-fifths must be in bank, and three-fifths may be with correspondents in central or other reserve city banks.

On November 26, 1912, against deposits subject to reserve requirements aggregating $7,034,844,399, banks held reserves of $1,431,275,556, or 20.35 per cent, the aggregate reserve held being $31,000,000 in excess of the legal requirement. Deposits subject to reserve in the three central reserve city banks were $1,521,666,703, reserve required $380,416,675, reserve held $371,135,255, the average for the three cities being 24.39 per cent. On the same date deposits of other reserve city banks totaled $1,927,292,934; the reserve required $481,823,233, and the reserve held $471,759,700, or 24.48 per cent. The average for central and all other reserve city banks was 24.44 per cent. The country banks' deposits on the same date were $3,585,884,760; reserve required $537,882,714, and the amount held $588,380,600, or 16.41 per cent. On February 4 the central reserve city banks' reserve averaged 25.58 per cent, other reserve city banks 25.09 per cent, making an average for the two classes 25.31 per cent. The reserve for the country banks was 16.45 per cent, and the average for all reporting banks 20.91 per cent. On April 4 the reserve in central reserve city banks averaged 24.33 per cent, that of other reserve city banks 24.75 per cent, with an average for all reserve city banks of 24.56 per cent. On the same date the country banks held reserve at an average rate of 16.42 per cent, and all banks 20.44 per cent. The average reserve of the central reserve city banks was at the maximum, 26.12 per cent, on June 4, while the average for other reserve city banks was 24.83 per cent. The country banks' average rate had increased to 16.62 per cent, while that of all banks was 20.95 per cent. The report for August 9, the last of the year, shows that while the average rate for central reserve cities was 25.41, that of New York was 26.42 per cent, against 22.92 and 22.93 per cent, respectively, for Chicago and St. Louis. In other reserve city banks the average was 25.27 per cent, and the average for all reserve city banks 25.33 per cent. The average rate in country banks dropped to 16.23 per cent. Deposits in all banks

on this date were $7,096,690,068, the reserve required $1,414,601,768, and the amount held $1,470,487,279, or 20.72 per cent.

While the law only permits a specific percentage of a bank's reserve to be maintained elsewhere than in its own vaults, the excessive credits, not taken into consideration in computing the reserve held, placed the banks in a better condition to meet liabilities than would appear from the foregoing references to the percentages of reserves held upon the dates indicated. With that condition in view, there is submitted herewith a statement based upon the returns for the five calls, showing the percentage of legal reserve as well as the percentage available at date of each report in each and all classes of banks:

Class of banks.	Nov. 26, 1912.		Feb. 4, 1913.		Apr. 4, 1913.		June 4, 1913.		Aug. 9, 1913.	
	Legal reserve.	Available reserve.	Legal reserve.	Available reserve.	Legal reserve.	Available reserve.	Legal reserve.	Available reserve.	Legal reserve.	Available reserve.
	Per ct.	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*
Central reserve city banks	24.39	24.39	25.58	25.58	24.33	24.33	26.12	26.12	25.41	25.41
Other reserve city banks	24.48	26.05	25.09	28.13	24.75	26.65	24.83	26.50	25.27	27.48
Country banks	16.41	22.52	16.45	23.01	16.42	22.40	16.62	21.78	16.23	21.57
All banks	20.35	23.89	20.91	24.99	20.44	23.99	20.95	24.02	20.72	24.01

Supplementing the preceding statement there is submitted herewith a table showing for each call from November 26, 1912, to August 9, 1913, the amounts and per cents of reserves held, and the excess or deficiency of reserve, by banks in the central reserve cities, other reserve cities, and country banks in each geographical division of the country.

Date of call.	Amount of reserve held.	Per cent reserve held.	Amount of excess reserve.
Central reserve cities:			
Nov. 26	$371,135,255	24.39	[1] $9,281,420
Feb. 4	429,225,430	25.58	9,680,568
Apr. 4	387,491,954	24.33	[1] 10,738,162
June 4	409,601,424	26.12	17,579,660
Aug. 9	411,454,004	25.41	6,620,184
Other reserve cities:			
Nov. 26	471,759,700	24.48	[1] 10,063,533
Feb. 4	496,227,297	25.09	1,797,414
Apr. 4	488,611,168	24.75	[1] 4,953,621
June 4	483,188,605	24.83	[1] 3,285,009
Aug. 9	475,447,359	25.27	5,035,534
Total reserve cities:			
Nov. 26	842,894,956	24.44	[1] 19,344,954
Feb. 4	925,452,727	25.31	11,477,982
Apr. 4	876,103,122	24.56	[1] 15,691,783
June 4	892,785,029	25.41	14,294,651
Aug. 9	886,901,362	25.33	11,655,717
COUNTRY BANKS.			
New England States:			
Nov. 26	55,573,888	16.46	4,922,040
Feb. 4	55,256,525	16.39	4,700,860
Apr. 4	54,223,554	16.32	4,377,214
June 4	55,194,843	16.78	5,867,924
Aug. 9	52,713,053	16.07	3,516,235
Eastern States:			
Nov. 26	172,062,453	16.03	11,049,035
Feb. 4	173,904,518	16.08	11,654,219
Apr. 4	175,558,820	15.97	10,712,638
June 4	178,268,783	16.23	13,518,000
Aug. 9	173,716,515	15.72	7,972,918

[1] Deficit.

Date of call.	Amount of reserve held.	Per cent reserve held.	Amount of excess reserve.
COUNTRY BANKS—continued.			
Southern States:			
Nov. 26	$103,957,101	16.56	$9,795,499
Feb. 4	104,276,844	16.51	9,519,758
Apr. 4	103,967,325	16.70	10,571,570
June 4	101,166,069	16.91	11,419,844
Aug. 9	95,470,019	16.69	9,663,517
Middle Western States:			
Nov. 26	156,961,569	16.26	12,152,698
Feb. 4	162,257,691	16.37	13,606,420
Apr. 4	164,877,882	16.32	13,299,371
June 4	166,168,498	16.47	14,859,678
Aug. 9	163,481,222	16.09	11,103,043
Western States:			
Nov. 26	57,432,595	16.75	6,010,758
Feb. 4	58,018,165	16.83	6,302,485
Apr. 4	58,866,375	16.81	6,325,658
June 4	57,939,192	16.85	6,347,865
Aug. 9	58,062,534	16.66	5,778,844
Pacific States:			
Nov. 26	41,493,250	17.55	6,037,312
Feb. 4	41,305,373	17.73	6,358,264
Apr. 4	41,363,215	17.61	6,124,346
June 4	40,641,361	17.63	6,055,745
Aug. 9	39,385,048	17.55	5,724,976
Hawaiian Islands:			
Nov. 26	899,745	36.56	530,546
Feb. 4	897,340	36.23	525,849
Apr. 4	837,380	38.05	507,285
June 4	702,568	36.18	411,323
Aug. 9	757,528	39.56	470,262
Total States:			
Nov. 26	588,380,600	16.41	50,497,886
Feb. 4	595,918,861	16.45	52,672,553
Apr. 4	599,494,552	16.42	51,918,081
June 4	600,081,306	16.62	58,480,377
Aug. 9	583,585,917	16.23	44,229,794
Total United States:			
Nov. 26	1,431,275,556	20.35	31,152,932
Feb. 4	1,521,371,588	20.91	64,150,535
Apr. 4	1,475,797,674	20.44	36,226,298
June 4	1,492,866,335	20.95	72,775,028
Aug. 9	1,470,487,279	20.72	55,885,510

CHANGES IN LOANS, BONDS, CASH, AND DEPOSITS.

In addition to the general résumé relating to the condition of the banks of the country at date of various returns during the year, it is of interest to note the changes in the principal assets and the individual deposits in banks, and for that purpose there is submitted herewith a statement by geographical divisions, showing the amount of loans, bond investments, cash in bank, and individual deposits, together with the averages for the year.

The table in question follows:

Changes in volume of principal assets and in deposits, by geographical divisions, 1912–13.

[In thousands of dollars.]

Divisions and dates.	Loans.	Bonds, etc.	Cash and cash items.	Individual deposits.
New England States:				
Nov. 26, 1912	$516,379	$164,449	$75,503	$507,844
Feb. 4, 1913	507,497	163,826	78,912	504,506
Apr. 4, 1913	504,949	167,498	73,163	495,261
June 4, 1913	507,379	167,770	78,583	509,462
Aug. 9, 1913	496,140	169,419	67,343	487,620
Average	506,469	166,592	74,701	500,938

Changes in volume of principal assets and in deposits, by geographical divisions, 1912–13—Continued.

Divisions and dates.	Loans.	Bonds, etc.	Cash and cash items.	Individual deposits.
Eastern States:				
Nov. 26, 1912	$2,200,969	$821,451	$638,979	$2,225,665
Feb. 4, 1913	2,273,475	827,080	691,942	2,238,868
Apr. 4, 1913	2,256,449	829,237	630,217	2,223,748
June 4, 1913	2,240,838	834,913	656,130	2,221,986
Aug. 9, 1913	2,276,924	830,234	539,154	2,110,703
Average	2,249,731	828,583	631,284	2,204,194
Southern States:				
Nov. 26, 1912	808,610	193,330	89,024	737,017
Feb. 4, 1913	806,667	194,782	90,508	743,226
Apr. 4, 1913	806,532	197,062	89,239	734,658
June 4, 1913	806,351	198,903	90,882	715,053
Aug. 9, 1913	812,345	201,756	77,994	678,449
Average	808,101	197,166	87,529	721,680
Middle Western States:				
Nov. 26, 1912	1,697,527	436,697	289,642	1,572,096
Feb. 4, 1913	1,713,786	441,237	312,745	1,596,898
Apr. 4, 1913	1,767,768	445,335	296,820	1,604,506
June 4, 1913	1,742,027	444,315	310,650	1,609,998
Aug. 9, 1913	1,745,709	447,345	289,977	1,603,854
Average	1,733,363	442,986	299,967	1,597,470
Western States:				
Nov. 26, 1912	400,598	100,765	55,239	440,814
Feb. 4, 1913	396,577	100,923	56,289	441,120
Apr. 4, 1913	401,138	100,379	57,823	445,022
June 4, 1913	405,185	100,644	57,249	441,203
Aug. 9, 1913	406,427	100,778	55,514	439,318
Average	401,985	100,698	56,423	441,495
Pacific States:				
Nov. 26, 1912	433,351	141,729	72,192	459,132
Feb. 4, 1913	425,479	140,862	81,383	458,821
Apr. 4, 1913	439,509	141,438	74,535	463,569
June 4, 1913	439,467	142,151	69,687	453,882
Aug. 9, 1913	429,232	142,010	68,232	439,478
Average	433,407	141,638	73,206	454,976
Island possessions:				
Nov. 26, 1912	1,548	995	710	1,993
Feb. 4, 1913	1,548	995	710	1,993
Apr. 4, 1913	1,751	993	708	2,023
June 4, 1913	1,781	992	573	1,877
Aug. 9, 1913	1,778	992	610	1,916
Average	1,681	993	662	1,960

Information comparable with the foregoing but classified to show the fluctuations in banks in central reserve and other reserve cities in the country appears in the table following. It will be noted that the deposits in the central reserve cities were at the maximum on February 4, 1913, and at the low point on August 9, falling from $1,030,956,000 in February to $900,260,000 in August. The low point in cash holdings was reached by other reserve city banks in August, while their deposits were at the maximum on June 4. Individual deposits in country banks were at the high point on April 4, and lowest during the period in question on November 26, 1912, while the cash holdings were highest on June 4 and lowest on August 9. The average individual deposits in the central reserve city banks, based on the five reports of the year, were $982,607,000, and the average amount of cash and cash items $567,648,000. The average deposits in other reserve city banks were $1,403,843,000, and the

cash and cash items $331,827,000, while the average deposits in country banks were $3,536,265,000, and their average holdings of cash and cash items $324,298,000.

Loans, bonds, cash, and individual deposits of national banks at date of each call from Nov. 26, 1912, to Aug. 9, 1913, inclusive, in central reserve cities, and other reserve cities, and the country, together with the average for each section, 1912–13.

[In thousands of dollars.]

	Loans.	Bonds, etc.	Cash and cash items.	Individual deposits.
Central reserve cities:				
Nov. 26, 1912	$1,298,170	$300,218	$573,774	$1,021,533
Feb. 4, 1913	1,387,574	306,933	629,157	1,030,956
Apr. 4, 1913	1,359,189	298,914	563,690	984,707
June 4, 1913	1,315,735	300,689	585,274	975,581
Aug. 9, 1913	1,375,094	300,800	486,345	900,260
Average	1,347,132	301,511	567,648	982,607
Other reserve cities:				
Nov. 26, 1912	1,629,264	431,354	325,852	1,412,616
Feb. 4, 1913	1,622,851	432,535	353,646	1,412,197
Apr. 4, 1913	1,648,673	440,486	331,773	1,417,724
June 4, 1913	1,640,317	439,218	343,220	1,435,930
Aug. 9, 1913	1,597,647	430,528	304,645	1,340,747
Average	1,627,750	434,824	331,827	1,403,843
Country banks:				
Nov. 26, 1912	3,131,546	1,127,843	321,663	3,510,411
Feb. 4, 1913	3,114,602	1,130,235	329,685	3,542,278
Apr. 4, 1913	3,170,232	1,142,541	327,050	3,566,355
June 4, 1913	3,186,975	1,149,779	335,259	3,541,950
Aug. 9, 1913	3,195,813	1,161,206	307,833	3,520,331
Average	3,159,834	1,142,321	324,298	3,536,265

SAVINGS DEPOSITORS AND DEPOSITS IN NATIONAL BANKS.

By reason of the strong competition for deposits and incidentally the payment of higher rates of interest on savings than on other accounts on the part of trust companies and other State banking institutions, the establishment of savings departments or the payment of interest on savings accounts by national banks has notably increased until at the present time about 45 per cent of the banks have taken that action, as shown by the reports relating to the number and volume of savings accounts.

The number of savings depositors or savings deposit accounts increased from 2,773,684 on November 26, 1912, to 3,020,831 on August 9, 1913, and funds to the credit of these depositors from $776,481,362 in November, 1912, to $824,476,995 in June last, although by August 9 there was a decline, as in the case of other deposits, when the amount of these accounts had fallen to $820,639,410. Notwithstanding this decline in volume there was a net increase during the year in savings accounts of $44,158,049. The average amount of savings deposits, based on the five returns for the year, is shown to have been $808,964,471, representing approximately 13.66 per cent of the average of all individual deposits. The average savings account is estimated at $265.

Based on the August 9 returns, the greatest amount, as well as the highest percentage of savings deposits, was held by national

banks located in the Eastern States. In this section 17.76 per cent of all deposits are savings. The percentage in the banks in the Southern States is 15.38, Middle Western States 13.20, the New England States 12.21, and the Pacific States, including Hawaii, 11.02.

The number of savings depositors, amount of savings deposits, together with the average savings account based on the reports for the current year, are shown in the following table:

Number of savings depositors and amount of savings deposits in national banks.

Date.	Number of reporting banks.	Number reporting savings deposits.	Number of depositors.	Amount of deposits.	Average deposit.
Nov. 26, 1912	7,420	3,331	2,773,684	$776,481,362.49	$280.00
Feb. 4, 1913	7,425	3,332	2,832,875	807,714,126.67	285.21
Apr. 4, 1913	7,440	3,372	2,918,546	815,590,460.80	279.50
June 4, 1913	7,473	3,416	2,965,532	824,476,995.42	278.07
Aug. 9, 1913	7,488	3,421	3,020,831	820,639,410.68	205.50

CLASSIFICATION OF NATIONAL BANKS BY CAPITAL STOCK.

In another part of this report there is a table in which national banks are classified according to capital stock and by States and geographical divisions. The banks are divided into the following classes: Those of $25,000, over $25,000 and less than $50,000, $50,000 and less than $100,000, $100,000 and less than $250,000, $250,000 and less than $1,000,000, $1,000,000 and less than $5,000,000, and $5,000,000 and over. The classification in question is based upon the returns for August 9 and includes 7,488 banks. There are a limited number of banks with capital of over $25,000 and less than $50,000, and although all banks with capital of less than $50,000 represent 32.34 per cent in number, the capital represented is but 6.07 per cent of the aggregate. Banks with capital from $50,000 and over but less than $250,000 number 4,383, or 58.54 per cent, while the capital represented by these banks is 36.10 of the aggregate. There are 665 banks with capital ranging from $250,000 and over but less than $5,000,000. In number these banks represent 8.88 per cent and in capital 41.26 per cent of the total capital. There are 18 banks with capital of $5,000,000 or over, less than one-fourth of 1 per cent of the banks in operation, but representing 16.57 per cent of the aggregate capital.

Number of national banks, classified by capital (paid in), on Aug. 9, 1913.

Class.	Number.	Per cent.	Amount.	Per cent.
$25,000	2,037	27.20	$51,082,061	4.84
Over $25,000 and less than $50,000	385	5.14	12,978,450	1.23
$50,000 and less than $100,000	2,339	31.24	125,199,220	11.85
$100,000 and less than $250,000	2,044	27.30	256,198,125	24.25
$250,000 and less than $1,000,000	506	6.76	201,882,230	19.11
$1,000,000 and less than $5,000,000	159	2.12	234,005,700	22.15
$5,000,000 and over	18	.24	175,000,000	16.57
Grand total	7,488	100.00	1,056,345,786	100.00

RELATION OF CAPITAL TO DEPOSITS, ETC., OF NATIONAL BANKS.

The capital of the banks in relation to individual deposits, to loans, and to aggregate resources, as well as the relation of capital and other profits to individual deposits, and the amount of specie and legal tenders to individual deposits, are shown in the following tables for comparable dates in the years 1910 to 1913, inclusive. As will be noted the relation of the various items changes but slightly from year to year.

The table in question follows:

Items.	1910	1911	1912	1913
Capital to individual deposits	$1.00 to $5.13	$1.00 to $5.35	$1.00 to $5.63	$1.00 to $5.45
Capital to loans	1.00 to 5.45	1.00 to 5.52	1.00 to 5.77	1.00 to 5.84
Capital to aggregate resources	1.00 to 9.80	1.00 to 10.12	1.00 to 10.48	1.00 to 10.30
Capital and surplus and other profits to individual deposits	1.00 to 2.74	1.00 to 2.84	1.00 to 2.96	1.00 to 2.82
Specie and legal tenders to individual deposits	1.00 to 6.04	1.00 to 6.14	1.00 to 6.58	1.00 to 6.41

BOND AND OTHER SIMILAR INVESTMENTS BY NATIONAL BANKS.

Excluding premium on United States bonds, stated at $6,876,636, the national banks' investments in United States bonds and other similar securities represented 17 per cent of the aggregate assets as shown by the returns for the call of June 4 last. The total of these investments is $1,882,812,145, the increase from the amount held on the corresponding date in 1912 being $1,853,825,171. Investments in United States bonds aggregated $788,626,560, of which $735,226,870 was held by the Treasurer of the United States as security for circulation and $47,061,690 as security for public deposits. In addition the banks hold unpledged United States bonds to the amount of $6,338,000. The next important investment is in railroad bonds, which amount to $345,204,195. Other public service corporation bonds are listed in the sum of $197,459,668, while the investment in State, county, and municipal bonds totals $175,345.382.

As will be noted by reference to the table following, showing in detail the investments of the banks in bonds and other securities, $1,094,185,585 is the total of these securities, exclusive of United States bonds.

The table follows:

Class.	June 14, 1912.	June 4, 1913.
State, county, and municipal bonds	$179,322,004	$175,345,382
Railroad bonds	354,321,271	345,204,195
Other public service corporation bonds	195,452,530	197,459,668
All other bonds	223,500,814	220,120,541
Stocks (presumably taken for debt)	43,097,143	52,085,149
Warrants, claims, judgments, etc	37,884,505	38,902,358
Various securities with the Treasury as security for public deposits	31,163,415	43,597,930
Foreign Government bonds	8,615,102	17,960,704
Other foreign bonds and securities	4,426,217	3,509,658
Total bonds other than United States	1,077,783,001	1,094,185,585
United States bonds to secure circulation	721,395,970	735,226,870
United States bonds to secure United States deposits	46,273,660	47,061,690
United States bonds on hand	8,372,540	6,338,000
Total United States bonds	776,042,170	788,626,560
Total bonds of all classes [1]	1,853,825,171	1,882,812,145

[1] Premium on United States bonds amounting to $6,876,636.89 not included.

PRODUCTIVITY OF LOANS AND BOND INVESTMENTS.

As the income of banks is obtained almost wholly from interest on loans and the return upon bonds and other securities, a statement is submitted herewith indicating the percentage of gross earnings of the banks as reported for the year ended June 30 to the volume of loans and investments reported by the banks on August 9, the next succeeding call. As will be noted, computations are made for each geographical division of the country. The total amount representing loans and investments is shown to be $8,061,090,393, and the gross earnings of the banks $499,252,336, or 6.19 per cent. The highest percentage returned is that obtained by the banks in the western division, viz, 8.33, and the lowest the Eastern States, 5.62. The rate in the New England States is 5.88.

In the accompanying table is shown the amount of loans, other investments, gross earnings of the banks, and the percentage of gross earnings to total investments for each geographical division:

Divisions.	Loans.	Bonds, etc.	Total investment.	Gross earnings.	Per cent of gross earnings to total investment.
New England States	$496,139,607	$169,419,358	$665,558,965	$39,167,912	5.88
Eastern States	2,276,923,907	830,234,713	3,107,158,620	174,578,785	5.62
Southern States	812,345,233	201,756,237	1,014,101,470	70,878,537	6.99
Middle Western States	1,745,709,787	447,345,080	2,193,054,867	133,234,332	6.08
Western States	406,426,525	100,777,797	507,204,322	42,236,192	8.33
Pacific States	429,232,861	142,009,779	571,242,640	38,977,549	6.82
Hawaii	1,777,605	991,904	2,769,509	179,029	6.46
Total	6,168,555,525	1,892,534,868	8,061,090,393	499,252,336	6.19

PERCENTAGE OF PRINCIPAL ITEMS OF ASSETS AND LIABILITIES OF NATIONAL BANKS.

Based upon conditions for a series of years it appears that approximately 70 per cent of the banks' assets are represented by loans and discounts, United States bonds, and lawful money, and a like percentage of liabilities by capital, surplus and other profits, and individual deposits. As will be noted by reference to the table following, loans and discounts represent 56.9 per cent, United States bonds 7.3 per cent, lawful money in bank 8.3 per cent of the total assets, and that the capital represents 9.7 per cent, surplus and profit 9.1 per cent, and individual deposits 53 per cent of the liabilities, as shown by the returns on August 9:

Items.	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
	Per ct.	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*
Loans and discounts	53.4	53.9	54.0	56.1	52.9	53.5	55.6	54.5	55.1	56.9
United States bonds	7.9	7.4	7.8	7.9	7.9	7.6	7.5	7.4	7.1	7.3
Lawful money	7.2	8.9	7.8	8.4	9.6	9.5	8.9	8.6	8.1	8.3
Total	68.5	70.2	69.6	72.4	70.5	70.6	72.0	70.5	70.3	72.5
Capital	11.0	10.7	10.4	10.7	10.2	9.8	10.2	9.9	9.4	9.7
Surplus and profits	9.8	8.3	8.4	8.8	8.5	8.4	8.9	8.7	8.7	9.1
Individual deposits	49.6	51.1	52.4	51.5	50.4	52.3	52.4	52.9	53.8	53.0
Total	70.4	70.1	71.2	70.9	69.1	70.5	71.5	71.5	71.9	71.8

* * * * * * *

BONDED DEBT OF THE UNITED STATES AND NATIONAL-BANK HOLDINGS.

At the close of the year ended October 31, 1913, the bonded debt of the United States available as security for national-bank circulation was as follows: Consols of 1930 (twos) $646,250,150, loan of 1908 (threes) $63,945,460, loan of 1925 (fours) $118,489,900, Panama Canal loans of 1906 and 1908 (twos) $84,631,980. The bonds unavailable as security for circulation are the Panama Canal loan (threes) issued to the amount of $50,000,000 and postal savings bond (two-and-a-halfs), of which five series have been issued aggregating $3,506,000. Of the bonds available as security for circulation, there are on deposit $743,513,990. In addition to the bonds deposited as security for circulation the Treasury holds like securities to the amount of $23,604,100 as security for public deposits. As the Treasury holds in the aggregate $113,218,833 in bonds of various classes and commercial paper as security for public deposits, it appears that $89,614,733 is the amount of securities held in addition to United States bonds. The latest returns show that the national banks' investments in United States bonds represent 80 per cent of the bonded debt of the United States.

The Government bonded debt in detail, together with the amount and kinds of Government bonds on deposit to secure circulation and Government deposits, the issues of postal savings bonds, and various other bonds, etc., held as security for public deposits, are shown in the following table:

Interest-bearing bonded debt of the United States and bonds on deposit to secure national-bank circulation and Government deposits, Oct. 31, 1913.

Class.	Bonded debt.	Bonds on deposit to secure circulation.	Bonds on deposit to secure Government deposits.
Consols of 1930 (twos)	$646,250,150	$604,264,950	$13,510,700
Loan, 1908–1918 (threes)	63,945,460	22,245,100	4,146,200
Loan, 1925 (fours)	118,489,900	35,302,700	4,037,700
Panama Canal loan:			
Series of 1906 (twos)	54,631,980	52,915,100	1,287,500
Series of 1908 (twos)	30,000,000	28,786,140	622,000
Series of 1911 (threes)	50,000,000	----------	17,745,200
Philippine loans and railway bonds (fours)	----------	----------	6,773,000
Porto Rico loans (fours)	----------	----------	1,821,000
District of Columbia bonds (three-sixty-fives)	----------	----------	933,000
Territory of Hawaii bonds (various)	----------	----------	2,012,000
State, city, and railroad bonds (various)	----------	----------	60,330,533
Postal savings bonds (two-and-a-halfs), 1911–1913 (first, second, third, and fourth series)	2,389,120	----------	----------
Postal savings bonds (two-and-a-halfs), 1913–1933 (fifth series)	1,116,880	----------	----------
Total	966,823,490	743,513,990	113,218,833

DEPOSITS AND WITHDRAWALS OF BONDS DURING THE YEAR.

The aggregate amount of bonds received for deposit as security for circulation, exclusive of deposits in substitution for a like amount withdrawn, was $40,241,510, of which $2,748,840 was deposited by banks chartered in the year and $37,492,670 by other banks for the purpose of increasing their circulation. Bonds to the amount of $20,767,990 were withdrawn by banks upon the deposit of lawful money

for the purpose of retiring a corresponding amount of circulation. The withdrawal of bonds by reason of liquidations amounted to $6,104,330, and of the bonds on deposit by insolvent banks $120,000 were withdrawn and disposed of as provided by law, thus making the total withdrawals $26,992,320, or an excess of deposit over withdrawal of bonds of $13,249,190.

The transactions during each month of the year are shown in the accompanying table:

Statement relative to the amount of United States bonds deposited as security for circulation by banks chartered and by those increasing their circulation, together with amount of bonds withdrawn by banks reducing circulation and by those closed, during each month ended Oct. 31, 1913.

Date.	Bonds deposited by banks chartered during the year.	Bonds deposited by banks increasing circulation.	Bonds withdrawn by banks reducing circulation.	Bonds withdrawn by banks in liquidation.	Bonds withdrawn, banks in insolvency.
1912.					
November	$82,750	$1,925,250	$573,600	$325,000	.....
December	220,000	1,901,950	617,740	326,250	.....
1913.					
January	295,760	3,732,750	715,750	1,584,250	.....
February	340,050	2,131,730	4,203,950	507,500	$90,000
March	237,510	2,675,500	2,067,010	100,750	.....
April	366,760	2,768,100	923,250	452,300	.....
May	514,500	5,046,700	1,531,450	1,050,010	.....
June	226,260	6,466,200	3,049,000	552,010	.....
July	130,250	2,503,290	1,203,540	297,500	.....
August	145,750	4,390,500	3,696,200	387,500	30,000
September	114,500	1,577,300	1,438,750	488,000	.....
October	74,750	2,373,400	747,750	33,260	.....
Total	2,748,840	37,492,670	20,767,990	6,104,330	120,000

EARNINGS AND DIVIDENDS OF NATIONAL BANKS.

To the shareholders of national banks from a dividend standpoint the year ended June 30, 1913, was quite satisfactory, as from net earnings totaling $160,980,084 dividends were paid to the amount of $119,906,050, or at the rate of 11.4 per cent, as against an average rate of 11.01 per cent for the prior five years, and only twenty-six hundredths of 1 per cent less than the average for 1912. The net earnings exceeded those for 1912 by $11,923,481, although the amount of dividends paid was less by $394,822. Dividends based on capital and surplus averaged 6.75 per cent for the year, while the net earnings to capital and surplus were 9.06 per cent.

On capital of $1,051,720,675 and on capital and surplus combined of $1,776,992,857, the banks' gross earnings were $499,252,336, against which losses and premiums were written off to the amount of $53,756,372, together with expenses and taxes of $284,515,880. Upon comparison with corresponding returns for 1912 it is seen that the gross earnings, based on capital and surplus, have increased a fraction in excess of 2 per cent, and the net earnings approximately one-half of 1 per cent.

In the accompanying table will be found data relating to the amount and per cent of dividends paid by national banks in each geographical division, together with the amount of capital and surplus of banks

reporting their earnings, and the relative proportion of surplus to capital. As will be noted, the highest dividend rate (15.08 per cent) was paid by the banks in the western division, and that the lowest, exclusive of Hawaii, was paid by banks in the New England States, viz, 8.61 per cent. The surplus of the banks approximated 70 per cent of their capital, ranging in continental divisions from the minimum of 47.77 per cent in the western division to the maximum of 103.61 per cent in the eastern.

The table in question follows:

Capital, surplus, amount and per cent of dividends paid by national banks in each geographical division for the year ended June, 1913.

Divisions.	Number of banks.	Capital stock.	Surplus.	Per cent of surplus to capital.	Amount of dividends paid.	Per cent of dividends to capital.
New England States	453	$101,436,700	$63,282,552	62.39	$8,730,919	8.61
Eastern States	1,650	338,349,675	350,561,370	103.61	41,135,784	12.16
Southern States	1,486	171,029,900	89,683,676	52.44	19,172,007	11.21
Middle Western States	2,048	281,753,100	145,424,562	51.61	29,647,178	10.52
Western States	1,259	71,582,500	34,195,228	47.77	10,793,546	15.08
Pacific States	504	86,958,800	41,859,372	48.14	10,381,416	11.94
Hawaii	4	610,000	265,422	43.51	45,200	7.41
Total	7,404	1,051,720,675	725,272,182	68.96	119,906,050	11.40

Following the abstracts of reports of earnings and dividends of national banks for the current year, appearing in the appendix is a condensed statement relating to the capital, surplus, and earnings and dividends for each year from 1869 to 1913, inclusive, together with the amount of aggregate earnings and dividends for the 44 years, from which it will be noted that upon the average capital and surplus of $633,132,322 and $265,033,657, respectively, the annual earnings averaged $76,664,139 and the dividends $58,568,695. The percentage of earnings to capital and surplus was 8.65, dividends, 6.52, and dividends to capital alone, 9.25. The entire net earnings as reported were $3,417,222,128 and the dividends $2,577,022,602, the latter amount being equivalent to 245 per cent of the capital as reported on June 30, 1913.

NATIONAL-BANK SHAREHOLDERS.

The number of national banks, the amount of capital, the number of shareholders and the average number of shares owned by each shareholder on July 7, 1913, are shown in the following table. A very few National banks converted from State banks have shares of stock of a par value of less or more than $100, but in preparing this table all shares of stock are regarded as having a par value of $100; that is, a shareholder owning two shares of stock in a national bank, the par value being $50, is assumed to be the owner of one share of the par value of $100.

It will be observed that the average number of shares held by each shareholder is greater in the Western States than in the Eastern and greater in the reserve cities than in the country banks, the lowest average being in the State of Delaware, where it is 8.6 and the highest average in the city of St. Paul, where it is 164.3.

The average number of shares owned by each shareholder in New York City is 63.4, and in Chicago is 112.7. The total number of shareholders is 432,920 and the average holding 24.4 shares.

Number of national banks, capital, number of shareholders, and average number of shares owned by each shareholder in the various States and reserve cities on July 7, 1913.

States and reserve cities.	Number of banks.	Capital stock.	Number of shareholders.	Average number of shares owned by each shareholder.
Maine	69	$7,740,000	5,353	14.5
New Hampshire	56	5,285,000	3,346	15.8
Massachusetts	163	29,792,500	19,688	15.1
Boston	17	28,200,000	5,824	48.4
Rhode Island	20	6,320,000	2,646	23.9
Connecticut	79	19,314,200	10,995	17.6
Vermont	49	4,985,000	2,967	16.8
Total New England States	453	101,636,700	50,819	20.0
New York	431	48,830,100	26,682	18.3
Albany	3	2,100,000	583	36.0
Brooklyn	6	2,252,000	1,041	21.6
New York City	36	119,700,000	18,880	63.4
New Jersey	201	22,352,000	17,071	13.1
Pennsylvania	783	67,874,390	63,908	10.6
Philadelphia	32	22,055,000	9,105	24.2
Pittsburgh	22	25,900,000	4,907	52.8
Delaware	25	1,688,975	1,969	8.6
Maryland	89	5,192,000	5,411	9.6
Baltimore	16	11,790,710	6,468	18.2
District of Columbia	1	252,000	150	16.8
Washington	11	6,350,000	2,210	28.7
Total Eastern States	1,656	336,337,175	158,385	21.2
Virginia	133	17,683,500	10,240	17.3
West Virginia	116	10,166,800	6,627	15.3
North Carolina	73	8,610,000	5,458	15.8
South Carolina	48	6,365,000	3,772	16.9
Georgia	115	14,268,500	6,978	20.4
Savannah	2	900,000	227	39.6
Florida	53	7,505,000	2,281	32.9
Alabama	87	9,965,000	3,483	28.6
Mississippi	33	3,385,000	2,057	16.5
Louisiana	26	3,020,000	1,710	17.7
New Orleans	5	5,200,000	1,266	41.1
Texas	84	33,874,850	14,302	23.7
Dallas	5	3,400,000	773	44.0
Fort Worth	8	3,175,000	342	92.8
Galveston	2	500,000	100	50.0
Houston	6	5,300,000	710	74.6
San Antonio	7	2,350,000	266	88.3
Waco	5	1,750,000	606	28.9
Arkansas	50	5,115,000	1,907	26.8
Kentucky	136	12,270,900	7,804	15.7
Louisville	8	5,495,000	2,349	23.4
Tennessee	108	13,140,000	7,049	18.6
Total Southern States	1,510	173,439,550	80,307	21.6
Ohio	356	35,454,100	19,243	18.4
Cincinnati	8	13,900,000	3,251	42.8
Cleveland	7	9,600,000	1,964	48.9
Columbus	8	3,000,000	586	51.2
Indiana	250	21,508,000	10,777	20.0
Indianapolis	5	6,400,000	1,378	46.4
Illinois	450	33,045,000	16,340	20.2
Chicago	10	43,750,000	3,883	112.7
Michigan	96	10,010,000	4,713	21.2
Detroit	3	5,000,000	808	61.9
Wisconsin	124	11,500,000	6,578	17.5
Milwaukee	5	6,300,000	709	88.9
Minnesota	161	11,956,000	5,515	21.7
Minneapolis	6	7,500,000	1,432	52.4
St. Paul	4	5,900,000	359	164.3

Number of national banks, capital, number of shareholders, and average number of shares owned by each shareholder in the various States and reserve cities on July 7, 1913—Continued.

States and reserve cities.	Number of banks.	Capital stock.	Number of shareholders.	Average number of shares owned by each shareholder.
Iowa	325	$18,570,000	8,555	21.7
Cedar Rapids	3	600,000	196	30.6
Des Moines	4	2,350,000	259	90.7
Dubuque	3	600,000	171	35.1
Sioux City	5	950,000	151	62.9
Missouri	112	6,715,000	3,815	17.6
Kansas City	12	8,250,000	1,452	56.8
St. Joseph	4	1,100,000	170	64.7
St. Louis	7	20,200,000	4,211	48.0
Total Middle Western States	2,068	284,158,100	96,516	29.4
North Dakota	145	5,260,000	2,008	26.2
South Dakota	104	4,235,000	2,134	19.8
Nebraska	228	10,495,000	3,388	31.0
Lincoln	4	1,000,000	168	59.5
Omaha	7	3,700,000	350	105.7
South Omaha	3	1,100,000	118	93.2
Kansas	205	10,892,500	5,334	20.4
Kansas City	2	500,000	310	16.1
Topeka	3	400,000	169	23.7
Wichita	3	500,000	65	76.9
Montana	57	5,160,000	1,119	46.1
Wyoming	30	1,710,000	530	32.3
Colorado	117	6,740,000	2,540	26.5
Denver	6	3,600,000	357	100.8
Pueblo	3	600,000	56	107.1
New Mexico	40	2,215,000	760	29.1
Oklahoma	313	12,092,500	4,735	25.5
Muskogee	5	900,000	205	43.9
Oklahoma City	6	1,300,000	202	64.4
Total Western States	1,281	72,400,000	24,548	29.5
Washington	60	4,135,000	1,462	28.3
Seattle	6	4,200,000	597	70.4
Spokane	5	3,400,000	448	75.9
Tacoma	2	500,000	73	68.5
Oregon	78	4,936,000	1,556	31.7
Portland	5	4,500,000	577	78.0
California	238	20,786,910	10,009	20.8
Los Angeles	8	6,800,000	1,552	43.8
San Francisco	9	28,500,000	2,948	96.7
Idaho	54	3,370,000	985	34.2
Utah	17	1,155 000	600	19.2
Salt Lake City	6	2,400,000	707	33.9
Nevada	10	1,710,000	332	51.5
Arizona	13	1,155,000	373	31.0
Alaska	2	100,000	19	52.6
Total Pacific States	518	87,647,910	22,238	39.4
Hawaii	4	610,000	107	57.0
Total island possessions	4	610,000	107	57.0
Total United States	7,490	1,056,229,435	432,920	24.4

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ORGANIZATION OF NATIONAL BANKS.

Within the year ended October 31, 1913, 243 applications for authority to organize national banks were received, of which 190 were approved, 4 rejected, and the remainder either abandoned or held pending the submission of further information.

Of the 10,457 banks chartered during the existence of the national banking system, 172, with authorized capital of $10,175,000, were chartered during the current year. There are in existence, of the total number chartered, 7,514 banks, 2,437 having been placed in voluntary liquidation and 506 in the charge of receivers. State banks to the number of 1,729, with capital at date of change of $339,955,928, were converted into national banks from 1863 to 1913.

In addition to the capital of banks organized during the year, there was an increase in capital of banks organized prior thereto of $20,260,000, making the gross increase for the year $30,435,000, but by reason of reductions of capital, voluntary liquidations, and failures the net increase was but $14,838,740, the authorized capital stock of all banks at the close of the year standing at $1,068,534,175.

Since March 14, 1900, charters have been granted to 5,193 associations, with authorized capital of $330,938,300, of which 3,304, with aggregate capital of $86,110,500, were organized under the act of that date with individual capital of $25,000 generally, although a limited number of banks were organized with capital in excess of $25,000 but less than $50,000. The average capital, however, of banks of this class was slightly in excess of $26,000. During the same period 1,889 were organized under the act of 1864, the aggregate capitalization being $244,827,800 and the individual capital $50,000 or over. Further classifying these banks, it appears that 810 were conversions of State banks, capital $60,735,800; 1,568 reorganizations of State or private banks, capital $109,892,000; and 2,815, with capital of $160,310,500 primary organizations.

In the following table will be found a classification of banks organized from March 14, 1900, to October 31, 1913, based upon capital stock, together with the number of banks and their reported capital on August 9, 1913, by States and geographical divisions.

Summary, by States, geographical divisions, and classes, of national banks organized from Mar. 14, 1900, to Oct. 31, 1913, and the paid-in capital stock of all reporting national banks on Aug. 9, 1913.

States, etc.	Capital $25,000.		Capital over $25,000 and less than $50,000.		Capital $50,000 and over.		Total organizations.		National banks reporting Aug. 9, 1913.	
	No.	Capital.	No.	Capital.	No.	Capital.	No.	Capital.	No.	Capital paid in.
New England States.										
Maine	4	$100,000	....	.....	7	$385,000	11	$485,000	69	$7,740,000
New Hampshire	4	100,000	1	$30,000	2	200,000	7	330,000	56	5,285,000
Vermont	5	125,000	....	.....	2	150,000	7	275,000	49	5,010,000
Massachusetts	2	50,000	....	.....	19	4,450,000	21	4,500,000	179	58,092,500
Rhode Island	....	.....	....	.....	1	500,000	1	500,000	20	6,320,000
Connecticut	5	125,000	....	.....	5	250,000	10	375,000	78	19,239,200
Total	20	500,000	1	30,000	36	5,935,000	57	6,465,000	451	101,686,700
Eastern States.										
New York	110	2,750,000	9	287,500	105	18,520,000	224	21,557,500	476	172,882,100
New Jersey	57	1,425,000	8	240,000	43	3,660,000	108	5,325,000	201	22,322,950
Pennsylvania	231	5,775,000	24	807,000	226	24,290,000	481	30,872,000	837	115,820,945
Delaware	6	150,000	3	95,000	....	.....	9	245,000	25	1,688,975
Maryland	32	800,000	5	172,000	13	1,480,000	50	2,452,000	105	16,982,710
District of Columbia	....	.....	....	.....	5	1,750,000	5	1,750,000	12	6,602,000
Total	436	10,900,000	49	1,601,500	392	49,700,000	877	62,201,500	1,656	336,299,680

Summary, by States, geographical divisions, and classes, of national banks organized from Mar. 14, 1900, to Oct. 31, 1913, etc.—Continued.

States, etc.	Capital $25,000.		Capital over $25,000 and less than $50,000.		Capital $50,000 and over.		Total organizations.		National banks reporting Aug. 9, 1913.	
	No.	Capital.	No.	Capital.	No.	Capital.	No.	Capital.	No.	Capital paid in.
Southern States.										
Virginia	39	$1,275,000	11	$396,000	46	$5,140,000	108	$6,811,000	133	$17,683,500
West Virginia	52	1,000,000	13	455,000	43	3,515,000	96	4,970,000	116	10,163,135
North Carolina	21	525,000	4	130,000	30	3,160,000	55	3,815,000	72	8,410,000
South Carolina	13	325,000			23	2,435,000	36	2,760,000	48	6,365,000
Georgia	26	650,000	20	675,000	53	5,100,000	99	6,425,000	117	15,168,500
Florida	9	225,000	7	225,000	28	5,325,000	44	5,775,000	53	7,505,000
Alabama	35	875,000	12	379,500	38	3,125,000	85	4,379,500	89	10,165,000
Mississippi	8	200,000	4	125,000	20	1,915,000	32	2,240,000	33	3,385,000
Louisiana	12	300,000	1	30,000	20	3,610,000	33	3,940,000	31	8,220,000
Texas	235	5,875,000	85	2,716,000	148	17,610,000	468	26,201,000	517	50,349,850
Arkansas	23	575,000	2	60,000	28	2,170,000	53	2,805,000	50	5,221,000
Kentucky	54	1,350,000	7	230,000	36	5,370,000	97	6,950,000	143	17,690,200
Tennessee	37	925,000	7	210,000	35	3,835,000	79	4,970,000	108	13,180,000
Total	564	14,100,000	173	5,631,500	548	62,310,000	1,285	82,041,500	1,510	173,506,885
Middle Western States.										
Ohio	110	2,750,000	19	658,000	89	12,925,000	218	16,333,000	379	62,004,100
Indiana	91	2,275,000	15	483,000	72	10,450,000	178	13,208,000	255	27,895,861
Illinois	169	4,225,000	19	663,500	99	14,750,000	287	19,638,500	459	75,777,500
Michigan	14	350,000	4	130,000	27	4,890,000	45	5,370,000	99	15,260,000
Wisconsin	37	925,000	4	125,000	30	3,550,000	71	4,600,000	129	17,800,000
Minnesota	179	4,475,000	15	471,000	30	4,700,000	224	9,646,000	271	25,356,000
Iowa	117	2,925,000	21	710,000	68	4,170,000	206	7,805,000	340	23,085,000
Missouri	37	925,000	15	480,000	42	16,085,000	94	17,490,000	133	36,140,000
Total	754	18,850,000	112	3,720,500	457	71,520,000	1,323	94,090,500	2,065	283,318,461
Western States.										
North Dakota	124	3,100,000	7	215,000	9	500,000	140	3,815,000	146	5,260,000
South Dakota	71	1,775,000	4	120,000	13	700,000	88	2,595,000	104	4,235,000
Nebraska	104	2,600,000	20	715,000	39	3,395,000	163	6,710,000	241	16,270,000
Kansas	94	2,350,000	11	390,000	31	2,400,000	136	5,140,000	213	12,312,500
Montana	25	625,000	4	130,000	16	1,340,000	45	2,095,000	57	5,160,000
Wyoming	12	300,000			11	625,000	23	925,000	30	1,710,000
Colorado	52	1,300,000	11	361,000	38	3,310,000	101	4,971,000	126	10,940,000
New Mexico	24	600,000	4	125,000	11	625,000	39	1,350,000	40	2,215,000
Oklahoma	349	8,725,000	31	1,010,000	69	5,305,000	449	15,040,000	326	14,330,000
Total	855	21,375,000	92	3,066,000	237	18,200,000	1,184	42,641,000	1,283	72,432,500
Pacific States.										
Washington	35	875,000	2	70,000	31	3,545,000	68	4,490,000	78	12,222,500
Oregon	33	825,000	3	91,000	27	2,295,000	63	3,211,000	83	9,436,000
California	113	2,825,000	6	190,000	123	26,862,800	242	29,877,800	255	56,818,060
Idaho	31	775,000	6	200,000	14	1,010,000	51	1,985,000	55	3,495,000
Utah	7	175,000	1	30,000	6	1,275,000	14	1,480,000	23	3,555,000
Nevada	3	75,000			9	1,225,000	12	1,300,000	10	1,710,000
Arizona	4	100,000	1	30,000	5	250,000	10	380,000	13	1,155,000
Alaska					1	50,000	1	50,000	2	100,000
Total	226	5,650,000	19	611,000	216	36,512,800	461	42,773,800	519	88,491,560
Island possessions.										
Hawaii	3	75,000			2	550,000	5	625,000	4	610,000
Porto Rico					1	100,000	1	100,000		
Total	3	75,000			3	650,000	6	725,000	4	610,000
Grand total	2,858	71,450,000	446	14,660,500	1,889	244,827,800	5,193	330,938,300	7,488	1,056,345,786

The number and capital, by classes, of conversions, reorganizations, and primary organizations, are shown in the following table:

Summary, by classes, of national banks organized from Mar. 14, 1900, to Oct. 31, 1913.

Classification.	Conversions.		Reorganizations.		Primary organizations.		Total.	
	Number.	Capital.	Number.	Capital.	Number.	Capital.	Number.	Capital.
Capital less than $50,000	476	$12,598,000	980	$25,977,000	1,848	$47,535,500	3,304	$86,110,500
Capital $50,000 or over	334	48,137,800	588	83,915,000	967	112,775,000	1,889	244,827,800
Total	810	60,735,800	1,568	109,892,000	2,815	160,310,500	5,193	330,938,300

Number of national banks organized in each month from Mar. 14, 1900, to Oct. 31, 1913.

Months.	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
	No.	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*
January	.....	36	40	34	36	45	45	40	32	28	28	12	16	16
February	.....	31	28	50	35	39	41	42	36	20	29	13	14	16
March	6	35	41	56	42	50	41	50	39	22	37	39	19	16
April	46	30	50	51	46	42	43	46	34	26	26	28	15	25
May	66	54	50	47	42	49	45	52	33	24	21	20	22	23
June	95	40	42	58	43	48	42	55	21	44	40	21	14	14
July	46	41	38	43	22	37	32	40	37	28	19	13	16	12
August	44	27	42	36	38	44	33	39	20	32	12	15	15	11
September	20	23	38	31	32	35	31	46	14	24	27	15	20	13
October	25	27	33	57	43	36	41	38	18	22	22	8	15	6
November	21	32	36	20	36	23	27	19	21	23	12	11	6	.....
December	29	36	54	32	45	38	41	23	18	27	18	11	14	.....
Total	398	412	492	515	460	486	462	490	323	320	291	206	186	152

Number and classification of national banks organized during the year ended Oct. 31, 1913.

Months.	Conversions.		Reorganizations.		Primary organizations.		Total.		Bonds deposited.
	No.	Capital.	No.	Capital.	No.	Capital.	No.	Capital.	
November	3	$180,000	1	$25,000	2	$50,000	6	$255,000	$82,750
December	2	75,000	7	825,000	5	225,000	14	1,125,000	220,000
January	2	250,000	4	180,000	10	1,025,000	16	1,455,000	295,760
February	2	200,000	4	100,000	10	935,000	16	1,235,000	340,050
March	4	200,000	2	225,000	10	495,000	16	920,000	237,510
April	6	205,000	7	775,000	12	550,000	25	1,530,000	366,760
May	7	355,000	5	205,000	11	605,000	23	1,165,000	514,500
June	4	125,000	4	300,000	6	375,000	14	800,000	226,260
July	3	175,000	2	50,000	7	225,000	12	450,000	130,250
August	2	55,000	1	25,000	8	475,000	11	555,000	145,750
September	1	100,000	3	80,000	9	235,000	13	415,000	114,500
October	1	50,000	....	.....	5	220,000	6	270,000	74,750
Total	37	1,970,000	40	2,790,000	95	5,415,000	172	10,175,000	2,748,840

* * * * * * *

REPORTS OF CONDITION OF BANKS IN THE UNITED STATES.

The Comptroller of the Currency is required, under the provisions of section 333 of the Revised Statutes of the United States, to incorporate in his annual report to Congress a statement exhibiting under appropriate heads the resources and liabilities and condition of the

banks, banking companies, and savings banks organized under the laws of the several States and Territories, the statute providing that the information shall be obtained from reports made to legislatures or officers of the different States and Territories or from such authentic sources as may be available.

Beginning with 1909, the annual statements received from banks outside of the national system have conformed in general as to details of assets and liabilities with the reports made by the national banks. Individual statements for a date concurrent with the June call on national banks, beginning with that year, have been furnished by State and private banks through the courtesy and assistance of the State bank superintendents. Prior to 1909 statements for State banks were furnished to the comptroller for varying dates and without uniformity in the form of the reports, many valuable details, such as classification of cash, bonds, and deposits, being wanting.

The statements used in this compilation are of date June 4, 1913, with the exception of State banks for Pennsylvania, May 1; Alabama, June 9; Tennessee, June 30; Iowa, June 28; and the island possessions, June 30.

Abstracts of reports of condition for each class of banks, arranged by States, will be found in the appendix to the Report of the Comptroller of the Currency. The summary referred to follows.

Summary of reports of condition from 25,993 banks in the United States and island possessions (including national, State, savings, and private banks and loan and trust companies), showing their condition at the close of business June 4, 1913.

RESOURCES.

Loans and discounts:		
Secured by real estate (including mortgages owned)	$3,547,695,105.05	
Secured by collateral other than real estate	4,512,707,862.67	
All other loans	6,507,837,576.52	
Overdrafts	58,532,120.08	
		$14,626,772,664.32
Bonds, securities, etc., including premiums thereon:		
United States bonds	825,228,283.66	
State, county, and municipal bonds	1,239,972,819.08	
Railroad bonds	1,530,184,170.20	
Bonds of other public-service corporations (including street and interurban railway bonds)	721,347,544.12	
Other bonds, stocks, warrants, etc	1,090,486,562.50	
		5,407,219,379.56
Banking house, furniture and fixtures		583,909,887.34
Other real estate owned		111,597,940.66
Due from banks		2,776,613,692.19
Checks and other cash items		141,783,839.99
Exchanges for clearing house		285,129,197.64
Actual cash on hand:		
Gold coin	$225,239,153.12	
Gold certificates	[1] 636,084,750.00	
Silver dollars	25,794,559.00	
Silver certificates	187,119,158.00	
Subsidiary and minor coins	38,442,887.35	
Legal-tender notes	242,682,375.00	
National-bank notes	106,597,492.00	
Cash not classified	98,149,072.58	
		1,560,709,447.05
Other resources		218,427,550.73
Total resources		25,712,163,599.48

LIABILITIES.

Capital stock paid in	2,096,849,861.75
Surplus	1,676,625,895.34
Undivided profits (including accrued interest and any other amounts set aside for special purposes, less current expenses, interest, and taxes paid)	573,213,465.32
National bank notes outstanding	722,125,024.00
Due to banks	2,584,231,078.90
Dividends unpaid	3,590,839.76

[1] Includes $89,443,500 clearing-house certificates.

Individual deposits subject to check without notice	$8,240,942,008.89	
Savings deposits or deposits in interest or savings department	6,972,069,227.63	
Certificates of deposit	2,037,215,038.46	
Certified checks	129,398,232.75	
Cashier's checks outstanding	96,139,627.08	
		$17,475,764,134.81
Postal savings deposits		25,242,015.76
United States deposits		49,725,039.13
Notes and bills rediscounted		28,617,628.20
Bills payable, including certificates of deposit representing money borrowed		157,401,457.90
Other liabilities		318,777,158.61
Total liabilities		25,712,163,599.48

The foregoing summary of reports shows resources aggregating $25,712,163,599. Loans and discounts aggregated $14,626,772,664; bonds, securities, etc., $5,407,219,379; cash in bank, $1,560,709,447; capital, $2,096,849,861; surplus, $1,676,625,895; undivided profits, $573,213,465; individual deposits, $17,475,764,134. The banks reported postal savings deposits aggregating $25,242,015; and the United States deposits, including disbursing officers' accounts, reported by national banks were $49,725,039.

While there has been a marked increase in capital stock during the year, the increase being 4 per cent, against 3 per cent shown for the prior year, the statistics indicate that the volume of business has increased in much less proportion, resources showing an increase of 2.9 per cent against 6 per cent, and deposits 2.6 per cent against 7 per cent. During the year there has been a reduction of over $12,200,000 in the cash holdings of the banks.

The increase or decrease during the year is shown in the following table exhibiting loans, aggregate resources, capital, deposits, etc., of national and other reporting banks on June 4, 1913, and on June 14, 1912.

Items.	1913			1912.	Increase 1913 over 1912 (798 banks).
	7,473 national banks.	18,520 State, etc., banks.	Total, 25,993 banks.	Total, 25,195 banks.	
	Millions.	*Millions.*	*Millions.*	*Millions.*	*Millions.*
Loans and discounts	$6,162.0	$8,464.7	$14,626.7	$13,953.6	$673.1
United States bonds and all other bonds and securities	1,889.7	3,517.5	5,407.2	5,358.9	48.3
Cash	969.1	591.6	1,560.7	1,572.9	[1] 12.2
Aggregate resources	11,036.9	14,675.2	25,712.1	24,986.6	725.5
Capital	1,056.9	1,039.9	2,096.8	2,010.8	86.0
Surplus and undivided profits	988.7	1,261.1	2,249.8	2,166.1	83.7
Deposits (individual)[2]	5,953.4	11,522.3	17,475.7	17,024.0	451.7

[1] Decrease. [2] Exclusive of postal savings deposits.

The following comparative statement shows the classification of resources and liabilities of all reporting banks for each year from 1909 to 1913, inclusive:

Aggregate resources and liabilities of national and other reporting banks, 1909 to 1913.

Classification.	1909	1910	1911	1912	1913
	22,491 banks.	23,095 banks.	24,392 banks.	25,195 banks.	25,993 banks.
RESOURCES.					
Loans on real estate [1]	$2,505,977,970.46	$2,696,433,655.30	$3,023,747,576.34	$3,301,485,759.93	$3,547,695,105.05
Loans on other collateral security	3,975,993,315.69	4,115,829,707.08	4,123,052,705.66	4,239,942,380.07	4,512,707,862.67
Other loans and discounts	4,821,546,812.25	5,647,164,421.40	5,835,854,369.03	6,350,722,499.00	6,507,837,576.52
Overdrafts	69,699,592.98	62,381,193.45	63,735,193.87	61,455,604.59	58,532,120.08
United States bonds	792,787,711.29	784,592,463.97	773,455,177.84	823,266,866.97	825,228,283.66
State, county, and municipal bonds	1,091,541,455.19	1,116,245,096.69	1,200,898,075.21	1,273,554,050.84	1,239,972,819.08
Railroad bonds and stocks	1,560,006,360.83	1,464,842,032.51	1,602,130,358.08	1,631,544,479.26	1,530,184,170.20
Bonds of other public-service corporations	466,526,687.08	478,045,935.46	550,192,266.65	603,542,601.59	721,347,544.12
Other stocks, bonds, etc	703,580,001.88	979,644,571.67	925,180,526.51	1,026,975,383.45	1,090,486,562.50
Due from other banks and bankers	2,562,071,702.68	2,393,008,260.76	2,788,772,572.47	2,847,992,843.93	2,776,613,692.19
Real estate, furniture, etc	544,035,541.89	574,231,671.01	616,693,997.7	657,299,660.36	695,507,828.00
Checks and other cash items	437,892,578.11	620,469,182.00	422,688,514.06	430,101,255.82	426,913,037.63
Cash on hand	1,452,014,676.34	1,423,808,814.37	1,554,147,169.28	1,572,953,479.43	1,560,709,447.05
Other resources	111,380,014.05	193,623,517.10	150,534,879.89	165,805,908.94	218,427,550.73
Total	21,095,054,420.72	22,450,320,522.77	23,631,083,382.6	24,986,642,774.18	25,712,163,599.48
LIABILITIES.					
Capital stock	1,800,036,368.00	1,879,943,887.99	,952,411,085.56	2,010,843,505.70	2,096,849,861.75
Surplus fund	1,326,090,642.50	1,547,917,181.08	1,512,083,859.93	1,584,981,106.44	1,676,625,895.34
Other undivided profits	508,534,786.43	404,649,006.90	553,490,979.77	581,178,042.47	573,213,465.32
Circulation (national banks)	636,367,526.00	675,632,565.00	681,740,513.00	708,690,593.00	722,125,024.00
Dividends unpaid	3,310,944.76	20,856,304.16	5,689,184.23	3,639,127.75	3,590,839.76
Individual deposits	14,035,523,165.04	15,283,396,254.35	15,906,274,710.27	17,024,067,606.89	17,475,764,134.81
Postal Savings deposits	----------	----------	----------	----------	25,242,015.76
United States deposits	70,401,818.99	54,541,349.41	48,455,641.54	58,945,980.66	49,725,039.13
Due to other banks and bankers	2,484,103,895.37	2,225,380,795.62	2,621,054,947.82	2,632,635,075.58	2,584,231,078.90
Other liabilities	230,685,273.63	358,003,178.26	349,882,460.55	381,661,735.69	504,796,244.71
Total	21,095,054,420.72	22,450,320,522.77	23,631,083,382.67	24,986,642,774.18	25,712,163,599.48

[1] Includes mortgages owned.

The foregoing statistics show that the aggregate resources of the banks have increased from $21,095,054,420 in 1909, to $25,712,163,599 for the present year; a gain of $4,617,109,179, or about 22 per cent. The increase in aggregate bank resources during the past year has been $725,520,825, or 2.90 per cent. The statistics for 1912 showed an increase in resources over the prior year, in round amounts, of $1,355,000,000; in 1911 the increase was $1,181,000,000; in 1910, $1,355,000,000; in 1909, $1,512,000,000. Individual deposits since 1909 have increased from $14,035,523,165 to $17,475,764,134, a gain

of $3,440,240,969, or 24 per cent. The increase in deposits during the past year has been $451,696,528, or 2.65 per cent.

For the purpose of comparison the number of reporting banks, aggregate loans, resources, capital and deposits for the fiscal years 1907 to 1913, inclusive, are shown in the following table:

[In millions of dollars.]

Year.	Number of banks.	Loans.	Resources.	Capital.	Individual deposits.
1907	19,746	$10,763.9	$19,645.0	$1,690.8	$13,099.6
1908	21,346	10,437.9	19,583.4	1,757.1	12,784.5
1909	22,491	11,373.1	21,095.0	1.800.0	14,035.5
1910	23,095	12,521.7	22,450.3	1,879.9	15,283.3
1911	24,392	13,046.4	23,631.0	1,952.4	15,906.3
1912	25,195	13,953.6	24,986.6	2,010.8	17,024.0
1913	25,993	14,626.7	25,712.1	2,096.8	17,475.7

* * * * * * *

GROWTH OF BANKING IN RECENT YEARS.

The table following shows the growth of banks in the United States, including the island possessions, as indicated by the number of banks, capital stock, and individual deposits for four-year periods from 1900, the number of nonreporting banks, their capital and deposits being estimated from data obtained from reliable sources:

Bank.	Number.	Capital.		Individual deposits.	
		Amount.	Per cent.	Amount.	Per cent.
1900.					
National	3,732	$621,536,461	54.00	$2,458,092,758	31.97
State, etc	6,650	403,192,214	46.00	4,780,893,692	68.03
Reporting capital only	3,595	126,000,000		450,000,000	
Total	13,977	1,150,728,675	100.00	7,688,986,450	100.00
1904.					
National	5,331	767,378,148	52.06	3,312,439,841	31.70
State, etc	9,519	625,116,824	47.94	6,688,107,157	68.30
Nonreporting	3,994	81,409,702		447,998,992	
Total	18,844	1,473,904,674	100.00	10,448,545,990	100.00
1908.					
National	6,824	919,100,850	50.14	4,374,551,208	32.97
State, etc	14,522	838,058,353	49.86	8,409,959,961	67.03
Nonreporting	3,654	76,646,000		485,988.831	
Total	25,000	1,833,805,203	100.00	13,270,500,000	100.00
1912					
National	7,372	1,033,570,675	49.67	5,825,461,163	33.30
State, etc	17,823	977,272,830	50.33	11,198,606,443	66.70
Nonreporting	3,800	70,000,000		470,000,000	
Total	28,995	2,080,843,505	100.00	17,494,067,606	100.00
1913.					
National	7,473	1,056,919,792	48.89	[1]5,953,461,551	33.20
State, etc	18,520	1,039,930,069	51.11	11,522,302,583	66.80
Nonreporting	3,261	65,000,000		460,000,000	
Total	29,254	2,161,849,861	100.00	17,935,764,134	100.00

[1] Exclusive of postal savings deposits.

Since 1900 the number of banks in operation in the country has increased by over 109 per cent, and their volume of business, as indicated by their deposits, shows an increase of over 133 per cent. In 1900 the total number of banks in operation (data for nonreporting banks being estimated) was stated at 13,977, with capital of $1,150,728,675, individual deposits $7,688,986,450. The nonreporting banks in 1900 were estimated at 3,595, in 1904 at 3,994, in 1908 at 3,654, in 1912 at 3,800, and in 1913 at 3,261.

For the current year (again estimating nonreporting banks) the number has increased to 29,254, with aggregate capital of $2,161,849,861 and individual deposits of $17,935,764,134. In 1900 the capital of the 3,732 national banks was 54 per cent of the capital of all reporting banks and their individual deposits were about 32 per cent of the total. In June, 1913, the capital of 7,473 national banks was only 48.89 per cent of that of all banks, but their individual deposits had increased to 33.2 per cent. In 1900 the capital stock of national banks in round amounts aggregated $621,000,000, and of all other banks $529,000,000. For the current year the capital stock of national banks aggregates $1,056,900,000, and that of all other reporting and nonreporting banks $1,104,900,000. The figures show that national banks during the last 13 years have increased their capital by 70 per cent, while that of all other banks increased 109 per cent, but it further appears that national banks increased their volume of business, as measured by individual deposits, by a much larger percentage than did the other banks, the gain during this period being 142 per cent for nationals and 129 per cent for other banks.

BANKING POWER OF THE UNITED STATES.

The banking power of the United States in 1913, as represented by capital, surplus and other profits, deposits and circulation of national and other reporting banks, together with the estimated amount of funds of this character in nonreporting banks, is $23,181,545,433, against $22,548,706,835 in 1912. The increase for the year was $632,838,598, or 2.8 per cent, or about one-half of the percentage of increase in 1912 over 1911, when it was stated at 5.69 per cent. Since 1900, when it was reported at $10,685,000,000, the banking power has increased over 117 per cent. The details are set forth in the following table:

Banking power of the United States.

	Number.	Capital.	Surplus and profits.	Deposits.	Circulation.	Total.
National banks	7,473	$1,056,919,792	$988,747,755	[1][2] $6,021,848,465	$722,125,024	$8,789,641,036
State, etc., banks	18,520	1,039,930,069	1,261,091,605	[2] 11,528,882,723	.....	13,829,904,397
Nonreporting banks	3,261	65,000,000	37,000,000	460,000,000	.....	562,000,000
Total	29,254	2,161,849,861	2,286,839,360	18,010,731,188	722,125,024	23,181,545,433

[1] Includes United States deposits.

[2] Includes postal savings deposits.

* * * * * * *

CLASSIFICATION OF LOANS AND DISCOUNTS IN ALL BANKS.

Loans and discounts in the banks of the United States, as shown by reports of condition for 1913, aggregate roundly $14,626,700,000. Of this amount $6,162,000,000 is in national banks and $8,464,700,000 in banks other than national. Of the total loans the sum of $3,547,700,000 is reported as secured by real estate; $4,512,700,000 by collateral other than real estate; $6,507,800,000 are unclassified loans, and $58,500,000 overdrafts.

The classification of loans of banks other than national and of national banks compiled from reports of condition as of June 4, 1913, is set forth in the following table:

Loans and discounts.

Classification.	Number of banks.	Secured by real estate (including mortgages owned).	Secured by collateral other than real estate.	All other loans.	Overdrafts.	Total.
		Millions.	*Millions.*	*Millions.*	*Millions.*	*Millions.*
State banks	14,011	$555.6	$692.1	$1,467.4	$31.5	$2,746.7
Mutual savings banks	623	1,815.6	149.5	73.8	.....	2,038.9
Stock savings banks	1,355	488.2	113.5	184.0	1.9	787.5
Loan and trust companies	1,515	576.3	1,374.3	813.0	3.7	2,767.3
Private banks	1,016	35.2	14.9	71.8	2.4	124.3
Total	18,520	3,470.9	2,344.3	2,610.0	39.5	8,464.7
National banks	7,473	76.8	2,168.4	3,897.8	19.0	6,162.0
Grand total	25,993	3,547.7	4,512.7	6,507.8	58.5	14,626.7

From the foregoing statement it appears that about 24 per cent of the total loans are secured by real estate or other liens on realty, the proportion of loans secured by real estate for each class of banks being as follows: 89 per cent for mutual savings banks; 62 per cent for stock savings banks; 28 per cent for private banks; 20 per cent for State banks; 21 per cent for loan and trust companies; and slightly less than 1¼ per cent for national banks.

INVESTMENTS OF ALL BANKS IN BONDS AND OTHER SECURITIES.

Investments in bonds, securities, etc., of all banks, as shown by reports of condition for June 4, 1913, aggregated $5,407,200,000, against $5,358,900,000 in 1912, the increase being $48,300,000. The classification by amounts and percentages of investments held in 1912 and 1913 is as follows:

Classification.	1912		1913	
	Amount.	Per cent.	Amount.	Per cent.
	Millions.		*Millions.*	
United States bonds	$823.3	15.4	$825.2	15.2
State, county, and municipal bonds	1,273.5	23.8	1,240.0	22.9
Railroad bonds	1,631.6	30.4	1,530.2	28.3
Bonds of other public-service corporations	603.5	11.3	721.3	13.4
Other bonds, stocks, and securities	1,027.0	19.1	1,090.5	20.2
Total	5,358.9	100.0	5,407.2	100.0

From the foregoing table it will be noted that 28.3 per cent of the investments of banks reporting in 1913 is in railroad bonds, against 30.4 per cent in 1912; 13.4 per cent in bonds of other public-service corporations, against 11.3 per cent in 1912; 15.2 per cent in United States bonds, against 15.4 per cent in 1912. The percentage of State, county, and municipal bonds is 22.9 per cent, against 23.8 per cent in 1912; and the unclassified bonds, stocks, and securities is 20.2 per cent, as against 19.1 per cent in 1912.

In the following table is shown the various classes of bonds, stocks, and other securities held by the several classes of banks on June 4, 1913:

Classification of investments in bonds, etc., held by banks of the United States on June 4, 1913.

[Expressed in millions.]

Classification.	State banks.	Mutual savings banks.	Stock savings banks.	Private banks.	Loan and trust companies.	National banks.	All banks.
United States bonds	$3.3	$18.1	$5.1	$0.3	$2.8	[1] $795.5	$825.2
State, county, and municipal bonds	89.0	809.4	50.7	1.9	113.5	175.3	1,239.9
Railroad bonds	65.5	796.2	25.3	.6	297.3	345.2	1,530.2
Bonds of other public-service corporations	52.9	99.5	35.8	1.5	334.3	197.4	721.4
Other bonds, stocks, etc	140.8	95.4	29.6	5.5	443.1	376.2	1,090.5
Total	351.5	1,818.6	146.5	9.8	1,191.0	1,889.6	5,407.2

[1] Includes premium.

It thus appears that of the $825,200,000 United States bonds owned by the banks, $795,500,000 are held by national and $29,700,000 by all other banks—$18,100,000 of the latter amount being owned by mutual savings banks. It will also be noted that during the year there has been a net gain of $1,900,000 in United States bonds held by the banks. The national banks during the year have increased their holdings of United States bonds by $12,000,000, while there has been a decrease in the holdings of all other banks of $10,100,000. State banks held $1,100,000 less United States bonds than in 1912; mutual savings banks $1,800,000 less; stock savings banks $4,000,000 less; loan and trust companies, $3,200,000 less. Of the total investments in bonds, stocks, etc., 35 per cent is held by national banks, 33 per cent by mutual savings banks, and 22 per cent by loan and trust companies, the balance, 10 per cent, being the combined holdings of State banks, stock savings banks, and private banks. Fifty-three per cent of the investments of loan and trust companies consists of railroad and other public-service corporation bonds, and 49 per cent of the bonds held by mutual savings banks are of the same character, as also 41 per cent of the investments of stock savings banks, 33 per cent of State bank investments, 29 per cent of national bank investments, and 21 per cent of private bank investments. Forty-four per cent of the investments of mutual savings banks consists of State, county, and municipal bonds, the proportion of investments in this class of bonds by the other banks being 34 per cent

for stock savings banks, 25 per cent for State banks, 9 per cent for loan and trust companies, 9 per cent for national banks, and 19 per cent for private banks.

MONEY IN BANKS.

During the current year there has been a decrease of $12,244,032.38 in the cash holdings of all reporting banks. On June 14, 1912, the cash held by the banks aggregated $1,572,953,479.43; on June 4, 1913, it was reported at $1,560,709,447.05. There was a decrease, roundly, of $27,000,000 in the cash holdings of the national banks, but an increase of $14,800,000 in the holdings of all other banks. Of the total amount held by the banks on June 4, 1913, $969,100,000 was in national and $591,600,000 in other reporting banks. The proportion of cash to individual deposits in national banks was therefore shown to be 16.3 per cent, that for all other commercial banks, 7.4 per cent, and including the mutual savings banks, 5.1 per cent.

Owing to the difference in the reserve requirement of national banks and those operating under State laws it is not practicable to make a satisfactory comparable statement of the reserve held by national and by State banks, but it may be of interest to show here the percentage of cash holdings to demand liabilities held by national and by other commercial banks. The national banks held individual deposits subject to check together with demand certificates of deposit on June 4, 1913, aggregating $4,603,400,000, and the cash held (including legal tender, specie, and bills of other banks) was 21 per cent of this amount. All other commercial banks held cash aggregating $574,500,000 and their individual deposits subject to check, together with the estimated amount of demand certificates of deposit (which are not separately stated) were $4,560,000,000, the cash holdings therefore being 12.6 per cent. If the amount due to banks is included with other demand deposits, the percentage of cash holdings for national banks will be 14.4, and for all other commercial banks 11.4.

Coin and other money held by national banks, by other reporting banks, and by all reporting banks, are shown in the following table:

Classification of cash in banks June 4, 1913.

Classification.	7,473 national banks.	18,520 State, etc., banks.	25,993 reporting banks.
Gold coin	$143,762,658.50	$81,476,494.62	$225,239,153.12
Gold certificates	323,619,310.00	223,621,940.00	547,241,250.00
Gold clearing-house certificates	89,443,500.00	.....	89,443,500.00
Silver dollars	13,720,873.00	12,073,686.00	25,794,559.00
Silver certificates	133,339,825.00	53,779,333.00	187,119,158.00
Subsidiary and minor coin	23,768,943.95	14,673,943.40	38,442,887.35
Legal-tender notes	189,908,013.00	52,774,362.00	242,682,375.00
National-bank notes	51,538,808.00	55,058,684.00	106,597,492.00
Cash not classified	.....	98,149,072.58	98,149,072.58
Total	969,101,931.45	591,607,515.60	1,560,709,447.05

DISTRIBUTION OF MONEY IN THE UNITED STATES.

In the following table is shown the distribution of money in the United States, giving the amount in the Treasury as assets, amount in reporting banks, and elsewhere, from 1892 to 1913, inclusive:

Year ended June 30—	Coin and other money in the United States.	Coin and other money in Treasury as assets.[1]		Coin and other money in reporting banks.[2]		Coin and other money not in Treasury or banks.			In circulation, exclusive of coin and other money in Treasury as assets.	
		Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.	Per capita.	Amount.	Per capita.
	Millions.	*Millions.*		*Millions.*		*Millions.*			*Millions.*	
1892	$1,752.2	$150.9	8.60	$586.4	33.48	$1,014.9	57.92	$15.50	$1,601.3	$24.60
1893	1,738.8	142.1	8.17	515.9	29.68	1,080.8	62.15	16.14	1,596.7	24.06
1894	1,805.5	144.2	7.99	688.9	38.17	972.4	53.84	14.21	1,661.3	24.56
1895	1,819.3	217.4	11.95	631.1	34.96	970.8	53.36	13.89	1,601.9	23.24
1896	1,799.9	293.5	16.31	531.8	29.55	974.6	54.14	13.65	1,506.4	21.44
1897	1,906.7	265.7	13.93	628.2	32.94	1,012.8	53.13	13.87	1,641.0	22.92
1898	2,073.5	235.7	11.37	687.7	33.17	1,150.1	55.46	15.43	1,837.8	25.19
1899	2,190.0	286.0	13.06	723.2	33.02	1,180.8	53.92	15.51	1,904.0	25.62
1900	2,339.7	284.6	12.16	749.9	32.05	1,305.2	55.79	17.11	2,055.1	26.93
1901	2,483.1	307.8	12.39	794.9	32.02	1,380.4	55.59	17.75	2,175.3	27.98
1902	2,563.2	313.9	12.24	837.9	32.69	1,411.4	55.07	17.90	2,249.3	28.43
1903	2,684.7	317.0	11.80	848.0	31.59	1,519.7	56.61	18.88	2,367.7	29.42
1904	2,803.5	284.3	10.14	982.9	35.06	1,536.3	54.80	18.77	2,519.2	30.77
1905	2,883.1	295.2	10.24	987.8	34.27	1,600.1	55.49	19.22	2,587.9	31.08
1906	3,069.9	333.3	10.86	1,010.7	32.92	1,725.9	56.22	20.39	2,736.6	32.32
1907	3,115.6	342.6	11.00	1,106.5	35.51	1,666.5	53.49	19.36	2,773.0	32.22
1908	3,378.8	340.8	10.08	1,362.9	40.34	1,675.1	49.58	19.15	3,038.0	34.72
1909	3,406.3	300.1	8.81	1,444.3	42.40	1,661.9	48.78	18.68	3,106.2	34.93
1910	3,419.5	317.2	9.27	1,414.6	41.37	1,687.7	49.36	18.68	3,102.3	34.33
1911	3,555.9	341.9	9.61	1,545.5	43.46	1,668.5	46.93	17.75	3,214.0	34.20
1912	3,648.8	364.3	9.98	1,563.8	42.86	1,720.7	47.16	17.98	3,284.5	34.34
1913	3,720.0	356.3	9.58	1,552.3	41.73	1,811.4	48.69	18.61	3,363.7	34.56

[1] Public money in national-bank depositaries to the credit of the Treasurer of the United States not included.
[2] Money in banks of island possessions not included.

The general stock of money in the United States at the close of the fiscal year ended June 30, 1913, was $3,720,000,000, or $71,200,000 more than was reported in 1912. Of the total stock of money, $356,300,000, or 9.58 per cent, was in the Treasury as assets, $1,552,300,000, or 41.73 per cent, in reporting banks in the United States, and $1,811,400,000, or 48.69, outside the Treasury and banks; that is, in circulation among the people. The amount reported in circulation, exclusive of coin and other money in the Treasury as assets, is $3,363,700,000, or $34.56 per capita, being $79,200,000 more than the amount reported in 1912.

INDIVIDUAL DEPOSITS IN ALL BANKS IN THE UNITED STATES.

Individual deposits in all reporting banks on June 14, 1912, aggregated $17,024,000,000; for the current year these deposits aggregate $17,475,700,000, being an increase of $451,700,000, or 2.6 per cent. The percentage of increase in 1912 over 1911 was 7 per cent. Of the aggregate deposits in all reporting banks on June 4 last, national banks held 34.1 per cent; savings banks, 27.1 per cent; loan and trust companies, 20.4 per cent; state banks, 17.6 per cent; and private banks, 0.8 per cent. The following table shows the amount and per cent of

individual deposits held by the several classes of banks in 1911, 1912, and 1913:

Classification.	1911		1912		1913	
	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
	Millions.		*Millions.*		*Millions.*	
State banks	$2,777.6	17.5	$2,920.0	17.2	$3,081.0	17.6
Savings banks	4,212.6	26.5	4,451.5	26.1	4,726.5	27.1
Private banks	142.3	.9	152.5	.9	143.4	.8
Loan and trust companies	3,295.8	20.7	3,674.6	21.6	3,571.3	20.4
National banks	5,478.0	34.4	5,825.4	34.2	5,953.5	34.1
Total	15,906.3	100.0	17,024.0	100.0	[1]17,475.7	100.0

[1] Postal savings not included.

The following table shows the distribution of individual deposits by geographical sections on or about April 28, 1909, on June 14, 1912, and June 4, 1913, together with the amount and percentage of increase for the four-year period and for the current year:

Distribution of individual deposits.

Geographical divisions.	1909	1912	1913	Increase 1913 over 1912.		Increase 1913 over 1909.	
				Amount.	Per cent.	Amount.	Per cent.
	Millions.	*Millions.*	*Millions.*	*Millions.*		*Millions.*	
New England States	$2,106.2	$2,446.4	$2,514.4	$68.0	2.78	$408.2	19.38
Eastern States	6,047.7	7,094.9	6,999.3	[1]95.6	[1]1.35	951.6	15.73
Southern States	1,059.2	1,374.2	1,477.3	103.1	7.50	418.1	39.47
Middle Western States	3,196.2	4,087.7	4,315.9	228.2	5.58	1,119.7	35.03
Western States	700.2	786.6	871.5	84.9	10.79	171.3	24.46
Pacific States	897.1	1,191.9	1,263.3	71.4	5.99	366.2	40.82
Islands	28.9	42.3	34.0	[1]8.3	[1]19.62	5.1	17.65
Total	14,035.5	17,024.0	17,475.7	451.7	2.65	3,440.2	24.51

[1] Decrease.

It will be noted that the highest percentage of increase in deposits during the past year, 10.79, is shown for the Western States. In 1912 the highest percentage of increase was 10.22 for the Pacific States. The percentage of increase in deposits during the current year for the other sections is as follows: Southern States 7.50, Pacific States 5.99, Middle Western States 5.58, New England States 2.78. In the Eastern States there is shown to have been a decrease of 1.35 per cent and also a decrease of 19.62 per cent for the island possessions, partly due to incomplete returns from Hawaii and Porto Rico. The largest volume of increase was in the Middle Western States, or $228,200,000, followed by the Southern States with $103,100,000, the Western States with $84,900,000, the Pacific States with $71,400,000, and the New England States $68,000,000. For the Eastern States a decrease of $95,600,000 is shown, and for the island possessions a decrease of $8,300,000.

Since 1909 individual deposits held by the banks have increased 24.51 per cent. The highest percentage of increase for the four years is shown for the Pacific States, the gain in deposits for that section being 40.82 per cent; next in order are the Southern States with an

increase of 39.47 per cent, the Middle Western States with 35.03 per cent, the Western States with 24.46 per cent, the New England States with 19.38 per cent, the island possessions with 17.65 per cent, and the Eastern States with 15.73 per cent. In the following table is shown the classification of individual deposits in national banks, in banks other than national, and in all reporting banks on June 4, 1913:

Classification of individual deposits in national and other banks.

Classification.	7,473 national banks.	18,520 State, etc., banks.	Total, 25,993 banks.
Individual deposits subject to check	$4,041,704,403.21	$4,199,237,605.68	$8,240,942,008.89
Savings deposits	824,476,995.42	6,147,592,232.21	6,972,069,227.63
Certificates of deposit	944,170,542.35	1,093,044,496.11	2,037,215,038.46
Certified checks	80,823,835.00	48,574,397.75	129,398,232.75
Cashiers' checks outstanding	62,285,775.14	33,853,851.94	96,139,627.08
Total	5,953,461,551.12	11,522,302,583.69	17,475,764,134.81

It will be noted that of the $17,475,700,000 on deposit in all reporting banks, $6,972,000,000, or nearly 40 per cent, consists of savings deposits, $2,037,200,000 are certificates of deposits (time and demand), and $8,240,900,000 are commercial deposits that are subject to check without notice.

SAVINGS DEPOSITS IN ALL BANKS.

Savings deposits are supposed to represent chiefly the accumulations of wage earners and other people of moderate means, and by reason of this fact statistics relating to such deposits are of special interest. Savings deposits in all banks of the country increased from $6,496,192,707 in June, 1912, to $6,972,069,227 in June last, the increase during the year being $475,876,520, or over 7 per cent. The aggregate deposits in all banks on June 4, 1913, roundly stated, were $17,475,700,000; of this amount $6,972,000,000, as stated, was savings deposits, exclusive of $211,445,687 held by savings banks subject to check without notice. Statistics showing the number of savings depositors in all banks for the current year are not available, but the information obtained upon this subject in 1911 showed that there were on June 7 of that year over 17,600,000 savings accounts on the books of the various banks of the country. For the purpose of comparison the following table is presented relative to the classification of deposits in each class of banks as shown by reports of condition as of June 4, 1913:

Classification of deposits in each class of banks as of June 4, 1913.

Classification.	Number of banks.	Individual deposits subject to check without notice.	Savings deposits or deposits in interest or savings department.	Certificates o deposit.
State banks	14,011	$1,740,122,513.11	$636,910,746.06	$656,792,526.71
Mutual savings banks	623	439,374.04	3,768,895,176.30	51,544.51
Stock savings banks	1,355	138,425,887.58	744,532,754.43	71,437,626.96
Loan and trust companies	1,515	2,244,413,391.43	970,855,018.71	323,824,531.72
Private banks	1,016	75,836,439.52	26,398,536.71	40,888,266.21
Total, State, etc., banks	18,520	4,199,237,605.68	6,147,592,232.21	1,093,044,496.11
National banks	7,473	4,041,704,403.21	824,476,995.42	944,170,542.35
Grand total	25,993	8,240,942,008.89	6,972,069,227.63	2,037,215,038.46

Classification of deposits in each class of banks as of June 4, 1913—Continued.

Classification.	Certified checks.	Cashiers' checks outstanding.	Total.
State banks	$33,571,639.44	$13,614,157.47	$3,081,011,582.79
Mutual savings banks		169,235.74	3,769,555,330.59
Stock savings banks	1,041,254.30	1,429,913.82	956,917,437.09
Loan and trust companies	13,854,105.65	18,413,956.39	3,571,361,003.90
Private banks	107,398.36	226,588.52	143,457,229.32
Total, State, etc., banks	48,574,397.75	33,853,851.94	11,522,302,583.69
National banks	80,823,835.00	62,285,775.14	[1] 5,953,461,551.12
Grand total	129,398,232.75	96,139,627.08	17,475,764,134.81

[1] United States deposits not included.

A statement showing the aggregate amount of savings deposits held by banks in each State and geographical division, with the per capita, will be found incorporated with the table of resources and liabilities on another page.

By referring to the table in question it will be noted that the largest amount of savings deposits are held by banks in the State of New York, $1,910,600,000, followed by Massachusetts with $877,300,000, Pennsylvania with $669,800,000, and California with $453,500,000. Other large amounts are $346,800,000 in the savings department of the banks of Illinois, $324,400,000 in the Ohio banks, and $318,900,000 in the Connecticut banks. The total savings deposits in the banks of Massachusetts are more than one-third of the total individual deposits of the banks of the New England States, and the savings deposits in the banks of New York represent over 27 per cent of the individual deposits in all banks of the Eastern States. In the Southern States the Virginia banks hold the largest amount of savings deposits, or $47,000,000, Louisiana being next with $31,400,000, Georgia third with $30,800,000, and South Carolina fourth with $26,900,000. In the Middle Western States, as before indicated, Illinois is first with $346,800,000, Ohio second with $324,400,000, and Michigan third with $250,100,000. In the Western States Colorado is first with $23,600,000 savings deposits, Nebraska is second with $18,900 000, and Montana third with $13,400,000. In the Pacific States, California, as before indicated, is first with $453,500,000, Washington second with $51,200,000, and Utah third with $21,800,000. The amount of savings deposits per capita for the United States is $71 and for each geographical section is as follows: New England States, $245; Eastern States, $134; Pacific States, $91; Middle Western States, $50; Southern States, $10; Western States, $9. The gain during the year in the per capita amount of savings deposits was as follows: $7 for the New England States, $5 for the Eastern States, $9 for the Pacific States, $4 for the Middle Western States, 69 cents for the Southern States, and 75 cents for the Western States, or $3 for the United States.

STATE, SAVINGS, AND PRIVATE BANKS AND LOAN AND TRUST COMPANIES.

Summaries of the reports received for the current year from State, savings, and private banks, and loan and trust companies show the condition on June 4, 1913, of 18,520 banks other than national, or

697 more than reported in 1912. The aggregate resources of these banks are $14,675,243,842.44. In 1912, 17,823 banks other than national made reports showing aggregate resources of $14,124,878,897.03. The increase in resources for the year is therefore shown to be $550,364,945.41. The returns for the current year include 14,011 commercial banks, 623 mutual savings banks, 1,355 stock savings banks, 1,016 private banks, and 1,515 loan and trust companies. The returns for each class of banks, with the exception of private banks, are practically complete.

The statistics for 38 States have been prepared from official returns as of June 4, 1913, with the exception, as to date, of those from Pennsylvania, May 1; Alabama, June 9; Tennessee, June 30; Iowa, June 28; and the island possessions, June 30. These returns were supplemented as to details of resources and liabilities by reports submitted by individual banks.

A summary of the reports of condition of the banks other than national is submitted herewith:

Summary of reports of condition of 18,520 State, savings, and private banks and loan and trust companies in the United States on June 4, 1913.

RESOURCES.

Loans and discounts:		
(a) Secured by real estate (including mortgages owned)	$3,470,875,172.42	
(b) Secured by collateral other than real estate	2,344,289,012.36	
(c) All other loans	2,610,048,226.52	
Overdrafts	39,525,968.06	
		$8,464,738,379.36
Bonds, securities, etc., including premiums thereon:		
(a) United States bonds	29,725,086.77	
(b) State, county, and municipal bonds	1,064,627,437.08	
(c) Railroad bonds	1,184,979,975.20	
(d) Bonds of other public-service corporations (including street and interurban railway bonds)	523,887,876.12	
(e) Other bonds, stocks, warrants, etc	714,310,222.37	
		3,517,530,597.54
Banking house, furniture and fixtures		335,020,933.39
Other real estate owned		80,264,992.50
Due from banks		1,380,425,430.88
Checks and other cash items		104,691,594.23
Exchanges for clearing house		27,568,705.07
Actual cash on hand:		
(a) Gold coin	$81,476,494.62	
(b) Gold certificates	223,621,940.00	
(c) Silver dollars	12,073,686.00	
(d) Silver certificates	53,779,333.00	
(e) Subsidiary and minor coins	14,673,943.40	
(f) Legal-tender notes	52,774,362.00	
(g) National-bank notes	55,058,684.00	
(h) Cash not classified	98,149,072.58	
		591,607,515.60
Other resources		173,395,693.87
Total resources		14,675,243,842.44

LIABILITIES.

Capital stock paid in		1,039,930,069.75
Surplus		956,019,102.80
Undivided profits (including accrued interest and any other amounts set aside for special purposes, less current expenses, interest, and taxes paid)		305,072,502.75
Due to banks		463,679,507.21
Dividends unpaid		2,061,644.19
Individual deposits subject to check without notice	$4,199,237,605.68	
Savings deposits or deposits in interest or savings department	6,147,592,232.21	
Certificates of deposit	1,093,044,496.11	
Certified checks	48,574,397.75	
Cashier's checks outstanding	33,853,851.94	
		11,522,302,583.69
Postal savings deposits		6,580,140.29
Notes and bills rediscounted		14,536,647.84
Bills payable, including certificates of deposit representing money borrowed		98,575,662.98
Other liabilities		266,485,980.94
Total liabilities		14,675,243,842.44

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For the purpose of comparison a statement giving the principal items of resources and liabilities of banks other than national, from 1909 to 1913, inclusive, is submitted herewith:

Consolidated returns from State, savings, private banks, and loan and trust companies.

Items.	1909	1910	1911	1912	1913
Loans	$6,385,522,766.61	$7,065,906,476.21	$7,412,153,800.11	$7,979,852,420.09	$8,464,738,379.36
Bonds	3,009,480,709.72	3,111,409,758.78	3,289,468,093.00	3,497,602,404.25	3,517,530,597.54
Cash	525,237,773.25	558,355,958.16	556,085,728.23	576,810,655.97	591,607,515.60
Capital	866,056,465.00	890,376,773.99	932,777,933.31	977,272,830.70	1,039,930,069.75
Surplus and undivided profits	1,039,548,321.54	1,091,162,580.06	1,152,073,936.93	1,215,331,634.26	1,261,091,605.55
Deposits (individual)	9,209,462,780.66	9,996,179,942.15	10,428,283,553.82	11,198,606,443.53	11,522,302,583.69
Resources	11,726,170,577.59	12,553,695,826.04	13,248,034,688.36	14,124,878,897.03	14,675,243,842.44

STATE BANKS.

Reports from State banks (commercial banks) to the number of 14,011 have been received, showing capital of $483,103,779.15 and aggregate resources of $4,143,052,802.86. In 1912 reports were received from 13,381 State banks with capital of $459,067,206.81 and aggregate resources of $3,897,770,826.71. The increase during the year is shown to be 630 in the number of banks, $24,036,572.34 in capital, and $245,281,976.15 in aggregate resources. A summary of the reports submitted by the State banks shows in round amounts loans aggregating $2,746,600,000, investments in bonds, securities, etc., $351,400,000, cash on hand $246,200,000, capital $483,100,000, surplus and undivided profits $285,100,000, and individual deposits $3,081,000,000. Of the loans, $555,100,000 are reported as secured by real estate, including mortgages owned, and $692,000,000 as secured by collateral other than real estate, $1,467,400,000 being unclassified loans and $31,500,000 overdrafts. The investments in bonds, securities, etc., consist of $3,350,000 United States bonds, $88,973,000 State, county, and municipal bonds, $65,501,000 railroad bonds, $52,854,000 bonds of other public-service corporations, while $140,817,000 are unclassified. The individual deposits were classified as follows: Deposits subject to check without notice $1,740,100,000, savings deposits $636,900,000, certificates of deposit $656,700,000, certified checks and cashiers' checks outstanding $47,100,000, and postal savings deposits $1,800,000.

SAVINGS BANKS.

There has been a marked increase in deposit balances of savings banks during the past year as well as in the number of depositors, the increase being largely in excess of the gain in 1912 over 1911.

In 1912 reports were received from 1,922 savings banks; for the present year reports to the number of 1,978 have been tabulated, 623 being from mutual institutions and 1,355 from stock savings banks—the latter class transacting both a savings and a commercial bank business. Deposits in these banks aggregate $4,727,403,950.79 and the depositors number 10,766,936, the average deposit account being $439.07. The 1,922 savings banks reporting in June, 1912, had

deposits aggregating $4,451,818,522.88 to the credit of 10,010,304 depositors, the average deposit account being $444.72. It is therefore shown that there has been an increase during the year of 56 in the number of banks reporting, 756,632 in the number of depositors, and $275,585,427.91 in the amount of deposits, while the average deposit account has decreased by $5.65. In 1912 the increase in deposits over 1911 was $239,234,924; the increase in the number of depositors was 215,657. The percentage of increase in deposits in 1913 was 6.2, and in depositors 7.5; the increase in 1912 over 1911 was 5.6 per cent in deposits and 2.2 per cent in depositors. The average deposit account, however, has fallen from $444.72 in 1912 to $439.07 in 1913.

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MUTUAL SAVINGS BANKS.

Reports were received as of June 4, 1913, from 623 mutual savings banks with $3,769,555,330.59 deposits credited to 8,101,238 depositors, the average deposit account being $465.31. In June, 1912, reports were received from 630 mutual savings banks with deposits of $3,608,657,828.11 credited to 7,851,377 depositors, the average deposit account being $459.62. There has been a decrease of 7 in the number of banks reporting but an increase in deposits during the year aggregating $160,897,502.48, and an increase of 249,861 in the number of depositors. In 1912 the increase over 1911 was $148,082,756 in deposits and 160,404 in the number of depositors.

Mutual savings banks are confined chiefly to the manufacturing centers of the New England and Eastern States, there being only 23 institutions of this character reporting from other sections of the country, namely, 1 in West Virginia, 4 in Ohio, 5 in Indiana, 4 in Wisconsin, 8 in Minnesota, and 1 in California. The increase in deposits in mutual savings banks during the past year has been most marked in the Middle Western States where the percentage of increase was nearly 9 per cent, the increase in the New England States and the Eastern States being but 4 per cent.

The resources of the mutual savings banks aggregated $4,104,639,651 invested, as follows: Loans, $2,038,915,500, of which $1,815,585,610 are secured by real estate and $149,547,486 by other collateral security. The investments in bonds, securities, etc., aggregate $1,818,633,823 and include, in round amounts, United States bonds, $18,100,000; State, county, and municipal bonds, $809,400,000; railroad bonds, $796,200,000; bonds of other public-service corporations, $99,500,000; and unclassified bonds, etc., $95,400,000. The amount invested in banking house, furniture, and fixtures is $39,200,000, and in other real estate $11,800,000. The amount due from banks is reported at $155,600,000, and checks, cash items, etc., amount to $900,000. Cash in banks was reported at $17,100,000 and resources not classified $22,300,000. The surplus of mutual savings banks aggregates $269,700,000, undivided profits $60,400,000, individual deposits $3,769,500,000, and unclassified liabilities $4,800,000. The total number of savings depositors is 8,098,967 and all other depositors 2,271. Of the 623 mutual savings banks, 404 are located in the New England States. These banks have deposits aggregating $1,483,127,489 and 3,554,537 depositors. In the Eastern States there are 196 mutual sav-

ings banks with deposits of $2,128,458,093 and 4,197,425 depositors; 140 of these banks with deposits of $1,700,063,766 and 3,114,240 depositors are located in the State of New York. There is but one mutual savings bank in the Southern States, that being located in West Virginia, with deposits of $1,491,968 and 5,817 depositors. The Middle Western States have 21 mutual savings banks in operation with deposits aggregating $102,724,681 and 258,180 depositors. California has one mutual savings bank with deposits aggregating $53,753,098 and 85,279 depositors. Depositors in the California mutual savings bank have the largest average deposit account, namely, $630.32; in New York the average is $545.90, followed by Rhode Island with $544.93, Ohio with $526.59, and Connecticut with $497.02.

* * * * * * *

The average rate of interest paid depositors in mutual savings banks in 1913 was 3.94 per cent, against 3.90 per cent in 1912 and 3.95 per cent in 1911. The highest rate is paid by the West Virginia bank, 4.5 per cent, and the lowest average by the banks in Minnesota, 3.57 per cent. An average rate of 4 per cent is paid depositors in mutual savings banks in Rhode Island, Delaware, and Indiana. The average rate paid by the mutual savings banks in the New England States is 3.90 per cent, in the Eastern States 3.71 per cent, in the Middle Western States 3.84 per cent, and by the one bank in California 3.75 per cent.

STOCK SAVINGS BANKS.

Stock savings banks to the number of 1,355 furnished reports as of June 4, 1913. A large number of so-called savings banks transact chiefly a commercial business and carry very few savings accounts. In those States where savings-bank reports are not separately compiled by the State banking departments but classified with commercial banks, care has been exercised in eliminating from the classification made by this office all so-called savings banks which are chiefly banks of discount and deposit, transacting only a minimum of savings-bank business. Some difficulty is experienced in making the classification uniform throughout, but this difficulty can not be entirely overcome until the State banking department of every State shall make a separate classification of the reports for this class of banks.

The reporting stock savings banks are located as follows: Nine in New Hampshire, known as guaranty savings banks; 47 in the Eastern States, 192 in the Southern States, 870 in the Middle Western States, 58 in the Western States, and 179 in the Pacific States. There are a large number of so-called savings banks in Michigan, but only 27, indicating by their reports that they transact a minimum amount of commercial bank business, are included in this classification; and while a large number of commercial banks in Ohio use the word "savings" in their title, for the same reason only 63 in that State have been classified with savings banks. In California a large number of banks are known as departmental banks, which make separate reports to the banking department of that State for each class of business; that is, for their commercial, trust, and savings bank departments. The figures for California therefore include the resources and liabilities of savings banks and savings departments of other banks.

The capital stock of the 1,355 reporting stock savings banks amounts to $84,837,733.59, against $76,871,811.79 for 1,292 banks reporting last year. The increase is therefore shown to be 63 in the number of banks and $7,965,921.80 in capital. Their loans aggregate $787,543,252.98 and are classified in round amounts as follows: Secured by real estate, $488,100,000; secured by collateral other than real estate, $113,400,000; all other loans, including overdrafts, $185,900,000. Investments in bonds, securities, etc., including premiums, are as follows: United States bonds, $5,100,000; State, county, and municipal bonds, $50,700,000; railroad bonds, $25,300,000; bonds of other public service corporations, $35,700,000; and unclassified stocks, bonds, etc., $29,600,000.

In addition to the foregoing summary, the reports show cash in bank amounting to $35,600,000, and amount due from banks $103,600,000. Banking house, furniture and fixtures, and other real estate owned aggregate $36,900,000, and the surplus and undivided profits $60,100,000.

The depositors in stock savings banks number 2,665,698, of which 2,171,321 are savings depositors and 494,377 have commercial accounts. In arriving at the number of depositors, those in 88 banks have been estimated. The average rate of interest paid to depositors in stock savings banks ranges from 3.12 per cent to 3.70 per cent, the lower rate being for deposits not subject to restrictions as to withdrawal. In 1912 the percentages were 3.03 to 3.64. The average rate paid on savings deposits by the stock savings banks (guaranty) reporting from the New England States is 3.44 per cent, for the Eastern States the average is 3.52 per cent, for the Southern States 3.84 per cent, for the Middle Western States 3.46 per cent, for the Western States 3.95 per cent, and for the Pacific States 4.02 per cent. The highest average rate of interest paid on savings deposits is 4.50 per cent, by the banks in North Dakota and Wyoming; the lowest average rate, 3.04 per cent, is paid by stock savings banks in Wisconsin.

PRIVATE BANKS.

There are over 3,500 private banking concerns and brokerage houses in the country, but less than one-half of this number furnished reports for statistical purposes. Private banks appear to be most numerous in the Middle Western States, and over 76 per cent of those reporting are located in that section. Reports were received from 777 private banks in the Middle Western States, 77 from the Southern States, 75 from the Western States, 58 from the Eastern States, and 29 from the Pacific States. States from which the largest number reported were: Illinois, 235; Indiana, 197; and Ohio, 152.

In regard to the private banks of Ohio, the department of banks and banking of that State compiled for the first time, but too late to include in this report, a statement from 213 private banks with aggregate resources of $45,615,930.07. The resources of the 152 private banks of Ohio, which furnished reports to this office, aggregated $29,809,368.61. The reports from the private banks of New York are also incomplete, only 21 banks with aggregate resources of $4,625,734 reported this year, against 50 banks with aggregate resources of $14,799,754 reporting last year.

The capital of the 1,016 private banks from which reports were obtained aggregates $19,601,717.94. For 1912 reports were obtained from 1,110 private banks with capital of $22,348,040.33.

The principal items of resources and liabilities of the reporting private banks were as follows: Loans and discounts, $124,282,694.59; bonds, securities, etc., $9,845,121.57; due from banks, $26,763,368.40; cash on hand, $7,238,552.87; total resources, $182,785,398.17. The capital stock was reported at $19,601,717.94, surplus $7,925,570.48, undivided profits $3,362,365.36, and individual deposits $143,457,229.32.

LOAN AND TRUST COMPANIES.

In compiling the statistics for loan and trust companies, as far as possible, those concerns which are trust companies in name only—banks transacting no trust business—have been excluded from the summary which follows, but are included with the statistics for commercial banks. From these figures it appears that loan and trust companies have acquired banking resources amounting to over $5,100,000,000, or about one-half the resources of national banks.

Reports as of June 4, 1913, with the exception of those from Maine as of April 26, Pennsylvania May 1, and Nevada November 26 (1912), were received from 1,515 loan and trust companies with aggregate resources of $5,123,920,197.46. In 1912 reports were received from 1,410 loan and trust companies, with aggregate resources of $5,107,444,382.27; the increase therefore has been 105 in the number of companies reporting and $16,475,815.19 in aggregate resources. The capital stock is reported at $452,386,839.07, against $418,985,771.77 in 1912.

The number of loan and trust companies with aggregate capital stock, stated in round amounts, are located as follows: In the Eastern States 513, with capital of $220,300,000; Middle Western States 352, with capital of $108,000,000; Southern States 318, with capital of $57,700,000; New England States 195, with capital of $44,500,000; Western States 69, with capital of $6,700,000; and Pacific States 68, with capital of $14,900,000. The loans and discounts of loan and trust companies aggregate $2,767,346,174.33, classified in round amounts as follows: Secured by real estate, $576,300,000; by collateral other than real estate, $1,374,300,000; all other loans, including overdrafts, $816,600,000. Investments in bonds, securities, etc., including premiums aggregating $1,191,000,000 are classified as follows: United States bonds, $2,770,000; State, county, and municipal bonds, $113,500,000; railroad bonds, $297,300,000; bonds of other public-service corporations, $334,200,000; other bonds, stocks, etc., $443,000,000. The amount reported as due from banks was $553,000,000; invested in banking house, furniture, and fixtures, $133,000,000; other real estate owned, $33,000,000; and cash on hand, $285,000,000. Loan and trust companies had surplus amounting to $445,200,000 and undivided profits of $129,000,000. Individual deposits subject to check were reported at $2,244,000,000, savings deposits $970,000,000, certificates of deposit $323,000,000, and certified and cashiers' checks $32,000,000.

Comparing the foregoing statistics with those submitted in 1912 loans show an increase of $56,100,000, cash on hand $3,233,000,

capital $33,401,000, surplus and profits $13,628,000, while investments in bonds and securities show a decrease of $21,100,000, and individual deposits a decrease of $103,200,000.

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In view of the currency legislation now pending in Congress and the contemplated revision of the national banking laws in the immediate future, it is not deemed advisable to submit any suggestions or recommendations in this report on these subjects.

THOMAS P. KANE,
Acting Comptroller of the Currency.

The SPEAKER OF THE HOUSE OF REPRESENTATIVES.

REPORT OF THE COMMISSIONER OF INTERNAL REVENUE.

TREASURY DEPARTMENT,
OFFICE OF COMMISSIONER OF INTERNAL REVENUE,
Washington, D. C., November 1, 1913.

SIR: I have the honor to make the following report of the work of the Bureau of Internal Revenue during the fiscal year ended June 30, 1913.

Included in this report is a statement of receipts from the several sources of internal revenue for the months of July, August, and September of the current fiscal year.

ACCOUNTS AND STATISTICS.

The total receipts of the bureau for the past fiscal year amounted to $344,424,453.85. Of this total there was collected from ordinary sources $309,418,154.01, an increase of $16,385,519.13, and from the special excise tax on corporations there was collected $35,006,299.84, an increase of $6,423,040.03, making a total increase over the collections of the fiscal year ended June 30, 1912, of $22,808,559.16. The collections for the past fiscal year exceeded the best record of former fiscal years, namely, 1911, by $21,898,154.12.

The receipts from ordinary sources for the first three months of the fiscal year 1914 were $79,257,887.58, as compared with $76,161,408.35 for the first three months of the fiscal year 1913, an increase of $3,096,479.23. Corporation tax collected for the first three months of the fiscal year 1914 amounts to $2,358,177.76, as compared with $1,880,379.82 collected during the first three months of the fiscal year 1913, an increase of $477,797.94, thus making an increase in total collections from all sources for the first three months of the current fiscal year over the same period of the previous fiscal year of $3,574,277.17.

I estimate the collections for fiscal year 1914 at $407,000,000, distributed as follows: Collections, exclusive of the corporation excise tax and income tax, $312,000,000; corporation excise tax, $8,000,000; income tax—corporations, $33,000,000; individuals, $54,000,000, a total of $87,000,000.

I estimate the collections for fiscal year 1915 at $420,000,000, distributed as follows: Collections exclusive of the income tax, $315,000,000; income tax—corporations, $40,000,000; individuals, $65,000,000, a total of $105,000,000.

The objects of internal taxation producing the largest amounts of internal revenue during the past fiscal year are distilled spirits, exclusive of special taxes, $157,542,061.75; fermented liquors, exclusive of special taxes, $65,245,544.40; manufactured tobacco, $76,789,424.75, including $319,100.64 from sale of internal-revenue stamps affixed to Philippine products, and special excise tax on corporations, $35,006,299.84, from each of which sources there was a substantial increase over the previous fiscal year.

RECEIPTS IN LARGE TAX-PAYING STATES AND COLLECTION DISTRICTS.

The States in which the largest collections of internal-revenue taxes were made during the fiscal year 1913 are Illinois, $58,302,601.36; New York, $47,250,446.34; Kentucky, $35,200,906.44; Indiana, $31,623,505.62; Pennsylvania, $28,959,530.66; Ohio, $25,169,957.10.

Among the States in which the smallest collections were made are Idaho, Mississippi, Nevada, New Mexico, North Dakota, Vermont, and Wyoming.

Of the collection districts, the fifth Illinois reported the largest collections, namely, $34,000,994.53.

The fiscal year 1913 witnessed a record production and a record withdrawal of distilled spirits, a substantial increase in the production of fermented liquors, an increase in the amount of tobacco and snuff manufactured, also in the number of large cigars, and a phenomenal increase in small cigarettes, a considerable increase in the production of oleomargarine, and a very large increase in corporation tax assessments and collections.

In the fiscal year 1912, the total production of distilled spirits was 187,571,808 gallons; in 1913, 193,606,258 gallons, an increase of 6,034,450 gallons. In the fiscal year 1912, 135,826,789 gallons of tax-paid spirits were withdrawn; in 1913, 143,220,056 gallons, an increase of 7,393,267 gallons.

The three States having the largest production of distilled spirits during the past fiscal year are Illinois, 43,964,336 gallons; Kentucky, 43,404,840; Indiana, 28,552,316 gallons.

The three collection districts having the largest output of distilled spirits are the fifth Illinois, 33,643,181 gallons; fifth Kentucky, 22,178,363 gallons; seventh Indiana, 18,658,162 gallons.

During the fiscal year 1913 there were tax paid for bottling in bond 10,626,633 taxable gallons as compared with 9,752,486 taxable gallons tax paid during the previous fiscal year, an increase of 874,147 taxable gallons.

The five States which produced the largest quantity of fermented liquors are New York, 13,956,878 barrels; Pennsylvania, 7,959,509 barrels; Illinois, 6,656,823 barrels; Wisconsin, 5,171,179 barrels; Ohio, 5,150,187 barrels.

The three collection districts which produced the largest quantity of fermented liquors are first Illinois, 5,601,469 barrels; third New York, 5,525,088 barrels; first Wisconsin, 4,329,696 barrels.

The four States producing the greatest number of cigars weighing more than 3 pounds per thousand and the production of each during the calendar year 1912 are as follows:

Pennsylvania	1, 962, 460, 574
New York	1, 150, 684, 740
Ohio	655, 376, 164
New Jersey	499, 343, 142

The two districts showing the largest production of cigars are the ninth Pennsylvania, 848,493,441, and the first Pennsylvania, 748,555,111.

The States showing the greatest production of little cigars (weighing not more than 3 pounds per thousand) are:

Maryland	521, 646, 210
Pennsylvania	244, 610, 690
Virginia	132, 660, 630

The greatest production by districts is as follows:

Maryland	521, 646, 210
First Pennsylvania	243, 734, 840
Sixth Virginia	128, 312, 980
Fifth New Jersey	76, 427, 940

The States of New York, Virginia, North Carolina, Louisiana, California, and Pennsylvania, in the order named, show the greatest production of cigarettes weighing not more than 3 pounds per thousand.

New York	7, 085, 728, 676
Virginia	2, 586, 596, 180
North Carolina	1, 547, 268, 500
Louisiana	677, 391, 115
California	161, 224, 510
Pennsylvania	109, 479, 475

The three districts showing the greatest production of little cigarettes are the second Virginia, which produced 2,578,487,780, the first New York, which produced 2,491,654,128, and the third New York, which produced 2,332,179,923.

New York produced the greatest number of large cigarettes, showing a production of 14,282,640, of which number 10,599,130 were manufactured in the third district and 3,588,760 in the second district.

The States of North Carolina, Missouri, Ohio, Kentucky, New Jersey, and Michigan, in the order named, are the States reporting the largest manufacture of both chewing and smoking tobacco, the quantity manufactured being as follows:

North Carolina	96, 546, 019
Missouri	73, 216, 606
Ohio	41, 895, 848
Kentucky	35, 646, 610
New Jersey	35, 114, 631
Michigan	25, 578, 282

The districts producing the largest quantity are:

First Missouri	73, 086, 059
Fifth North Carolina	61, 835, 494
Fifth New Jersey	35, 098, 429
Fourth North Carolina	34, 710, 525
First Ohio	32, 729, 121

The districts in which the largest amounts of corporation tax were collected are second New York, $5,399,380.57; first Illinois, $3,205,075.93; first Pennsylvania, $2,320,779.77; twenty-third Penn-

sylvania, $2,042,976.55; third Massachusetts, $1,752,199.05. The four States showing the largest collections from this source are New York, $8,189,784.23; Pennsylvania, $4,725,150.93; Illinois, $3,470,053.31; Ohio, $2,212,287.45.

COST OF COLLECTING INTERNAL-REVENUE TAXES.

The cost of collecting the internal revenue for the fiscal year was approximately $15.94 per $1,000, or 1.59 per cent. The cost of collection the previous year was $17.14 per $1,000, or 1.71 per cent. In 1911, the fiscal year in which the largest sum was collected prior to the fiscal year 1913, the cost of collection was $16.80 per $1,000, or 1.68 per cent.

The average cost of collection since the establishment of the bureau is $25.54 per $1,000, or 2.55 per cent.

The cost of collection for the past fiscal year, distributed approximately among the different items of appropriation, was as follows:

Salaries and expenses of collectors of internal revenue	$2,051,761.22
Miscellaneous expenses, Internal-Revenue Service	83,333.72
Salaries and expenses of agents and subordinate officers of internal revenue	2,616,307.17
Paper for internal-revenue stamps	79,321.10
Punishment for violation of internal-revenue laws	137,385.45
Expenses of collecting the corporation tax	143,995.77
Classifying, etc., returns of corporations	27,030.67
Salaries, office of Commissioner of Internal Revenue	345,519.51
Total amount expended	5,484,654.61

NOTE.—Not included in this total are bills approximating $5,000, covering expenses of deputy collectors in excess of allowances, transportation requests, miscellaneous items, etc., not yet adjusted.

The amount expended from the appropriation "Refunding internal-revenue collections" is $23,513.19. This amount is not considered as a part of the expense incident to the collection of internal revenue, so is not included in expenses enumerated above.

* * * * * * *

OBJECTS OF TAXATION.

DISTILLED SPIRITS.

During the past fiscal year there were produced from materials other than fruit, 185,353,383.1 taxable gallons of distilled spirits, or 7,103,398.1 gallons in excess of the quantity of like spirits produced during the fiscal year 1912.

There was also a corresponding increase in this class of spirits removed from bonded warehouses during the last year on payment of tax, the quantity so withdrawn (140,289,424.8 taxable gallons) exceeding that of the previous year by 7,030,277.2 gallons. The quantity remaining in distillery and general bonded warehouses, June 30, 1913, was 276,784,540 taxable gallons, or 12,998,708.2 gallons in excess of the quantity so held at the close of the fiscal year 1912.

From the following statement, showing the production and tax-paid withdrawal of spirits during each of the past 15 years, and the quantity held in bond at the close of each year, it will be seen that

the transactions during the last year exceeded those of any previous year, and are nearly double that reported for the year 1899:

Fiscal year.	Produced.	Withdrawn (tax-paid).	Remaining in warehouse.
	Gallons.	*Gallons.*	*Gallons.*
1899	97,066,554.7	83,694,338.1	136,841,378.9
1900	105,484,699.8	93,391,827.8	138,087,348.9
1901	124,520,599.8	99,191,721.5	152,733,138.0
1902	128,623,401.9	103,304,981.5	168,742,430.5
1903	141,776,202.1	112,788,168.0	188,350,778.1
1904	134,311,952.0	116,033,305.6	195,135,925.8
1905	147,810,794.3	115,994,857.5	215,557,323.6
1906	145,666,125.1	122,617,943.1	226,735,828.8
1907	168,573,913.2	134,031,066.7	245,438,816.0
1908	126,989,740.1	119,703,594.4	235,026,128.2
1909	133,450,755.1	114,693,578.2	229,141,434.0
1910	156,237,526.4	126,384,726.7	233,508,674.6
1911	175,402,395.5	132,058,636.5	249,279,346.6
1912	178,249,985.0	133,259,147.6	263,785,831.8
1913	185,353,383.1	140,289,424.8	276,784,540.0

While the stock of spirits held in warehouses at the close of the year 1913 was somewhat increased by the large production during the year, the quantity so held, as to which the bonded period will expire during the next four years, aggregates 32,835,769.4 gallons only. These spirits, now eligible for bottling in bond, average for the four years mentioned, a little over 8,000,000 gallons annually; and, as the quantity bottled in bond during the past year, on payment of tax or for export, was 10,681,047 gallons, it is evident that no large overstock of spirits of this class is now carried in bond.

The following table shows the quantity of spirits of various ages remaining in bonded warehouses at the close of the fiscal years 1912 and 1913:

Age of spirits.	Remaining in warehouse.	
	1912	1913
	Gallons.	*Gallons.*
Less than 1 year old	78,275,597.8	79,379,521.1
More than 1 and not more than 2	67,691,159.1	65,918,099.6
More than 2 and not more than 3	48,732,995.0	58,983,168.9
More than 3 and not more than 4	31,497,831.0	39,667,981.0
Less than 4 years old	226,197,582.9	243,948,770.6
More than 4 and not more than 5	13,321,991.0	18,156,715.9
More than 5 and not more than 6	13,832,886.2	5,460,797.0
More than 6 and not more than 7	6,603,167.3	6,202,547.2
More than 7	3,830,204.4	3,015,709.3
More than 4 years and eligible for bottling	37,588,487.8	32,835,769.4
Total in bond	263,785,831.8	276,784,540.0

DENATURED ALCOHOL.

During the past fiscal year there was denatured, free of tax, 9,831,658.54 wine gallons of alcohol and rum, as against 8,094,515 gallons denatured during the preceding year, or an increase of 1,737,143.54 wine gallons.

The following statement shows the quantity of such spirits denatured during each of the fiscal years since the enactment of the denatured alcohol law of June 7, 1906:

Fiscal year.	Number of denaturing warehouses.	Completely denatured.	Specially denatured.	Total.	
				Wine gallons.	Proof gallons.
		Wine gallons.	*Wine gallons.*		
1907	8	1,397,861.16	382,415.19	1,780,276.35	3,084,950.8
1908	12	1,812,122.38	1,509,329.35	3,321,451.73	5,640,331.2
1909	12	2,370,839.70	2,185,579.15	4,556,418.85	7,967,736.4
1910	12	3,076,924.55	3,002,102.55	6,079,027.10	10,605,870.7
1911	14	3,374,019.92	3,507,109.94	6,881,129.86	11,682,887.9
1912	14	4,161,268.56	3,933,246.44	8,094,515.00	13,955,903.8
1913	21	5,223,240.78	4,608,417.76	9,831,658.54	16,953,552.8
Total		21,416,277.05	19,128,200.38	40,544,477.43	69,891,233.6

As shown by the foregoing statement there has been a very noticeable and nearly uniform annual increase in the demand for this class of spirits; and, as will be noted, the quantity specially denatured about equals the quantity of completely denatured alcohol which, under existing regulations, may be sold and used without restriction for general purposes, such as for fuel, light, and power. The use of specially (incompletely) denatured alcohol, however, is permitted only in the manufacture of certain articles or preparations under regulations which require careful supervision on the part of the revenue officers. Up to the present time some 20 formulas for specially denatured alcohol have been approved for different lines of manufacture, and the quantity denatured under each of these formulas is given in a statement to be found on page 69 of this report. As shown in that statement the greater portion of the spirits so denatured is used in the manufacture of a class of articles and preparations as to which little, if any, reduction is made in the retail price on account of the exemption from tax of the alcohol so used. In view of the fact that the manufacturer in such cases, and not the public, is getting the benefit of this tax exemption, and as no inconsiderable expense is annually incurred by the Government in supervising the manufacture and use of such alcohol, I have to renew the recommendation made by my predecessor on page 12 of his report for the fiscal year 1912, that a nominal tax of, say, 1 cent per proof gallon, sufficient to cover the expense of such supervision, be imposed on this class of spirits.

Under existing law relating to the use of wine spirits free of tax in the fortification of sweet wine, a charge of 3 cents per proof gallon on the spirits so used is collected for the purpose of defraying the expense of the Government in supervising the use of such spirits, and the imposition of the tax or charge above recommended for a like purpose would seem both reasonable and proper under the circumstances stated.

INDUSTRIAL DISTILLERIES.

With a view to encouraging the establishment of small distilleries for the manufacture of alcohol from waste products, the amendatory act of March 2, 1907, provides for the establishment of distilleries,

having a daily capacity not exceeding 100 proof gallons, for the production of alcohol "from any substance whatever for denaturation only."

By regulations authorized by that act, distilleries of this class are exempt from most of the requirements imposed by law on other distilleries; but notwithstanding these very liberal regulations no distilleries of this class, designated in the regulations as "industrial distilleries," have so far been established, and doubtless for reasons set forth on page 7 of my predecessor's report for the fiscal year 1907. Provision, however, is now made in section IV (subsection 2) of the tariff act of October 3, 1913, for the establishment after January 1 next by farmers or associations of farmers, or others, of distilleries for the manufacture of alcohol free of tax for denaturation only, "out of any of the products of farms, fruit orchards, or of any substance whatever;" also for the establishment of "central distillery and denaturing plants" to which the alcohol so produced at these smaller distilleries (if not of sufficient proof strength, and not denatured on the distillery premises), may be transferred, redistilled, and redenatured under regulations and upon the execution of such notice and bond as the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, may prescribe. Under the privilege thus granted alcohol may hereafter be produced without restriction either as to the quantity or proof, thereby enabling inexperienced persons to operate small distilleries at a comparatively small cost.

Regulations governing the registry and operation of such distilleries and central denaturing plants will soon be issued, and in localities where such central plants are located, it is probable that farmers having sufficient waste farm products and having occasion to use denatured alcohol in any considerable quantity for farm purposes will avail themselves of this privilege. But it is, of course, difficult at this time to estimate even approximately the number of stills that will be so established and operated or the quantity of denatured alcohol that will be so produced.

DISTILLERIES.

During the fiscal year ended June 30, 1913, there were operated for the production of distilled spirits 398 grain distilleries, 22 molasses distilleries, and 450 fruit distilleries, a total of 870, an increase of 49 as compared with the fiscal year ended June 30, 1912.

During the year the systematic examination and close supervision of establishments engaged in the manufacture, rectification, and sale of distilled spirits heretofore employed have been continued, together with the scientific instruction of field and distillery officers.

FERMENTED LIQUORS.

The production of fermented liquors during the fiscal year ended June 30, 1913, was 65,324,876 barrels, being an increase of 3,148,182 barrels over the production of the previous fiscal year.

The number of breweries operated during the year was 1,446, a decrease of 15 as compared with the fiscal year 1912. Pipe lines were employed for conveying fermented liquors to the bottling premises at 296 of the breweries operated.

TOBACCO.

The receipts from the tax on manufactured tobacco, snuff, cigars, and cigarettes for the fiscal year ended June 30, 1913, amounted to $76,789,424.75, an increase over the collections from this source during the fiscal year ended June 30, 1912, of $6,199,273.15.

There were in operation during the calendar year 1912, 20,555 cigar factories and 469 cigarette factories, this being a decrease of 710 cigar factories and 9 cigarette factories. There were also registered 2,727 establishments producing manufactured tobacco, 76 producing snuff, 4,407 dealers in leaf tobacco, and 833 retail dealers in leaf tobacco in the United States.

Reports of retail dealers in leaf tobacco continue to show only a very limited sale of unmanufactured leaf tobacco.

It is again recommended that such legislation be enacted as will require every dealer in leaf tobacco to give a bond, the minimum penalty of which will be not less than $100, the penal sum of the bond to be increased according to the extent of the business proposed to be done and fixed by the collector of the district with right of appeal by the dealer to the Commissioner of Internal Revenue in respect to the amount of said bond. Each dealer in leaf tobacco should be required by law to make a true inventory of stock annually on the 1st day of January in each year and the Commissioner of Internal Revenue empowered to call upon dealers in leaf tobacco to show cause against assessment for tax on tobacco not accounted for and to make such assessments where explanations are not found satisfactory. Each dealer in leaf tobacco should also be required to render his report of transactions in leaf tobacco quarterly or monthly or for such periods as the Commissioner of Internal Revenue shall prescribe.

To lax laws relative to dealers in leaf tobacco is attributed the escape of considerable tobacco from tax payment. Registry with the collector for the district is now the only requisite before commencing business. A leaf dealer carrying a considerable quantity of tobacco on his books may disappear, as a number of them have each year, leaving no trace of the tobacco, and as no bond is now required of them, thousands of pounds of tobacco are not accounted for, the greater part being manufactured into cigars, which find their way to consumers without being tax paid.

It is again recommended that manufacturers of cigars, manufacturers of tobacco, dealers in leaf tobacco and retail dealers in leaf tobacco be required to register only on commencing business and not annually thereafter on the 1st day of July of each year. This will relieve collectors of internal revenue of considerable unnecessary labor and will effect a considerable saving in printing and stationery.

The question of the liability to tax of cigars known as "smokers" furnished to, or taken by, employees of manufacturers of cigars was decided by placing on the statute books the act approved February 10, 1913, amending section 3392 of the Revised Statutes as follows:

> That each employee of a manufacturer of cigars shall be permitted to use, for personal consumption and for experimental purposes, not to exceed 21 cigars per week, without the manufacturer of cigars being required to pack the same in boxes, or to stamp or pay any internal revenue tax thereon, such exemption to be allowed under such rules and regulations as the Secretary of the Treasury may prescribe.

Regulations have been issued in pursuance of this law and printed as Treasury Decision No. 1875.

The phenomenal increase in the number of cigarettes manufactured and removed tax paid during the fiscal year ended June 30, 1912, noted in the last annual report, has been more than maintained during the fiscal year ended June 30, 1913, for which receipts from the sale of stamps show the tax payment of 14,276,771,160 cigarettes, weighing not more than 3 pounds per thousand, an increase of 3,055,146,176 cigarettes over the previous fiscal year.

SPECIAL EXCISE TAX ON CORPORATIONS.

The collections of the special excise tax on corporations during the fiscal year ended June 30, 1913, amounted to $35,006,299.84, making the aggregate collections from this source for the four years the special excise tax law has been in existence $118,060,868.39. The total amount of corporation taxes assessed during the fiscal year ended June 30, 1913, including the 50 per cent additions to the tax because of failure or refusal of corporations to file their annual returns of net income on or before the first day of March was $36,208,839.12, which is $7,291,333.18 in excess of the year 1911, and is $6,776,583.69 in excess of the highest corporation tax assessed during any previous fiscal year.

Of the total amount assessed during the past fiscal year, $3,320,958.78 represents taxes assessed for the calendar years 1909, 1910, and 1911, the amounts due being ascertained through the investigation of revenue agents and inspectors and the adjustment of returns in this office from printed reports of the results of the operations of corporations, insurance companies, etc.

The corporation taxes assessed for the calendar year 1912 on the basis of the net income shown on the returns as filed exceeded the assessments for the previous year by $3,970,374.40, indicating either a year of increased business of corporations or an increase in the number of corporations doing business and having a net income in excess of $5,000.

The excess of assessments for the fiscal year ended June 30, 1913, over previous years is considered to be from both of these sources. No separate statistics showing comparative returns from the same corporations are compiled, but a record of the yearly return of each corporation is kept for reference in guiding the work of verifying the reports of corporations.

The largest increases in the assessments occurred in the districts of second New York, first Illinois, twenty-third Pennsylvania, and first Pennsylvania. Other large industrial centers show increases, while 10 districts show decreases, but the total decreases amounted to but $159,997.77, and of this amount $72,512.93 occurred in the fisrt district of Wisconsin.

The 50 per cent addition to the tax assessed because of the failure of corporations, etc., to file their returns of annual net income within the period prescribed by law amounted to $43,267.66, the smallest amount since the law has been in operation, the assessments on this account being $90,518.88 for 1912 and $323,221.20 for 1911.

The total number of corporations filing returns for the calendar year 1912 is 305,336, an increase of 16,984 over the calendar year 1911, the percentage of increase being 5.89.

The growth in the number of corporations in the United States is indicated by the number of returns made by those engaged in business for profit, which for the year 1909 was 262,490; for 1910, 270,202; for 1911, 288,352; for 1912, 305,336.

The 305,336 corporations rendering returns for the calendar year 1912 report a capital stock of $61,738,227,730.54. They report bonded and other indebtedness of $34,749,516,353.63, and an aggregate net income of $3,832,150,410.92. The increase in capital stock in 1912 over 1911 is $1,671,088,805.12, while the amount of bonded and other indebtedness shows an increase of $2,585,978,392.23. The net income reported shows an increase of $618,443,163.10.

The 33,234 corporations listed in class A, which embraces all incorporated financial institutions and insurance companies, report an aggregate net income equivalent to 15.89 per cent on the capital stock reported. Included in this list, however, are many insurance companies which have no or only a nominal capital stock.

The 25,585 corporations listed in class B, which embraces all public service corporations, such as transportation companies, heating and lighting companies, report an aggregate net income equivalent to 4.46 per cent on the capital stock reported.

The 96,122 corporations in class C, which embraces industrial and manufacturing concerns, report a net income equivalent to 6.29 per cent on the capital stock reported.

The 67,325 corporations in class D, which embraces all mercantile corporations not otherwise classed as producers or manufacturers, report a net income equivalent to 10.34 per cent on the capital stock reported.

The 83,070 corporations in class E, which includes such miscellaneous corporations as are not otherwise classed, report a net income equivalent to 4.5 per cent on the capital stock reported.

The total number of returns filed for 1912 was 305,336, while the number of corporations having a net income in excess of $5,000 was 61,116, or 20.01 per cent. The percentage of such corporations differ in accordance with the class. In class A, 12,185, or 36.69 per cent of the corporations making returns, report net incomes of $5,000 or over; in class B, 4,751, or 18.56 per cent; in class C, 21,429, or 22.29 per cent; in class D, 13,834, or 20.54 per cent; and in class E, 8,917, or 10.73 per cent.

Attention is called to the decrease in the amount of capital stock of corporations in Class C in the second district of New York, amounting to $1,376,265,330.70. Class C is composed of industrial and manufacturing corporations, such as mining, lumber, and coke companies, mills of all kinds, all manufacturers, etc. The greatest decrease occurs in the capital stock of mining corporations, many of which ceased to exist or are not doing business. Some of these mining enterprises which ceased to do business during the past year were entirely legitimate and failed through the lack of realization of the hopes of the promoters in the development of mining properties. Others of these defunct mining corporations were probably never more than prospective mining enterprises and did not get beyond the stage of placing their stock upon the market for sale.

The work of investigating the returns of annual net income of corporations to ascertain whether the return had been properly

made—that is, whether all income required by law to be included in the return of annual net income had been so included and that the deductions from gross income did not include any sums other than those allowed by law—has been prosecuted with such vigor as was possible with the limited force at the command of the commissioner for this purpose.

The additional assessments arising through the investigations of agents and the work of adjustment of returns of annual net income in the office of the commissioner resulted in additional assessments for the year 1909, 1910, and 1911, of $3,320,958.78, of which amount $1,392,336.05 belonged to the year 1911. The investigations have been going on more actively the past six months and the work has been carried into several new centers of population, so that every important mining, industrial, and financial district in the United States has received some attention, as has also many of the less important centers, With an adequate number of agents who are properly fitted to carry out the work of verifying the returns of annual net income of corporations, not only will additional tax be secured but the general work of educating the corporations as to their duties and the requirements of the Government as to the ascertainment of annual net income in accordance with the rules laid down, in the law will be carried on with more celerity. It is realized that this work will be under the income-tax law next year and with the likelihood that there will be little change for many years to come in the system of obtaining revenue from this source, it is believed that every effort should be put forth in every possible manner to require corporations to make absolutely accurate returns of annual net income, not only for one year but for every year, and failure to make accurate returns of annual net income will be carefully inquired into, to ascertain whether there was any intent, in such cases, to evade the tax. The law providing for a special excise tax on corporations has now been on the statute books more than four years, and it is believed that that is a sufficient length of time to have every corporation fully informed as to the requirements of the law, and that they should, therefore, be held to strict accountability for any failure to comply with any of the provisions of the law and the regulations with respect to making their returns of annual net income.

The amount of back taxes for 1911 ($1,392,336.05) assessed in 1912 is greater than would ordinarily be the case and is attributable to the following circumstances. On January 9, 1912, a disastrous fire occurred in a large office building in the city of New York, in which the records of many corporations were lost and it was impossible for such corporations to make complete returns of annual net income within the period prescribed by law until the records could be rehabilitated from other sources. Tentative returns were, therefore, filed and permission was given the corporations to file amended returns as soon as sufficient data could be again assembled and accurate returns of annual net income be made. The corporations affected were not able to complete this work until after the close of the fiscal year, so that when assessment was made the amounts were assessed and collected during the fiscal year ended June 30, 1913, and credited to back taxes collected. Ordinarily, back taxes collected refer to taxes ascertained to be due the Government from the investigations of revenue agents, while the amounts referred to above arose in an

entirely different way and had the effect, as stated, of increasing to an abnormal amount the back taxes assessed for the fiscal year ended June 30, 1911.

The constant inquiries being made by the Government into the returns of annual net income of corporations disclose many instances of faulty accounting, and many investigations have resulted in the corporation being placed upon a financial footing more sound and more secure by reason of the fact that the officers of the corporation were brought to realize that their method of accounting was entirely inadequate and the resulting adoption of modern accounting.

In various instances the investigations of the Bureau of Internal Revenue caused corporations to call in public accountants for the purpose of ascertaining just what was the status of the financial condition of the corporation, and these examinations frequently resulted in conclusions most astounding to the officers of the corporations affected. The conditions revealed were sometimes unpleasant to the officers of the corporation, but however unpleasant a knowledge of the facts might be, a realization of actual conditions was beneficial, and half the cure of the trouble. In this particular the investigations referred to have been of very great service to many corporations. Although much remains to be accomplished, it is considered that the results of the administration of the law providing for the special excise tax on corporations show satisfactory progression.

OLEOMARGARINE.

The fiscal year ended June 30, 1913, established the highest record of operations in oleomargarine since the enactment of the original law, August 2, 1886, with a total production of 138,707,426 pounds of uncolored and 6,520,436 pounds of colored oleomargarine, or a total of 145,227,862 pounds of both classes, as against 122,365,414 pounds of the uncolored and 6,235,639 pounds of the colored, making a total of 128,601,053 pounds of these two classes during the fiscal year 1912, or an increase of 16,342,012 pounds of the uncolored and 284,797 pounds of the colored, making a total net increase of 16,626,809 pounds over the previous year.

The fiscal year 1910 shows the next highest record of production, with a total of 141,862,280 pounds of both classes, which is 3,365,582 pounds less than that produced in 1913.

Withdrawals tax paid during 1913 amounted to 138,242,848 pounds at one-fourth cent and 4,090,658 pounds at 10 cents per pound, or a total of 142,333,506 pounds as compared with 121,945,038 pounds at one-fourth cent and 3,174,331 pounds at 10 cents, making a total of 125,119,369 pounds at both rates during 1912, an increase of 16,297,810 pounds of uncolored and 916,327 pounds of the colored; a total net increase of 17,214,137 pounds tax paid during the fiscal year 1913.

A decrease of 46,474 pounds of uncolored and 626,149 pounds of colored product is shown in the withdrawals free of tax for export during 1913.

The total collections from all oleomargarine sources during 1913 amounted to $1,259,987.67 as against $1,128,707.25 during 1912, being an increase of $131,280.42. Of these collections for 1913, $16,750 was

from special taxes of manufacturers; $21,048 from retail dealers in colored product; $291,645.08 from retail dealers in uncolored; $3,340 from wholesale dealers in colored; $162,575.25 from wholesale dealers in uncolored product; and $417,165.38 from stamp tax at 10 cents and $347,463.96 stamp tax at one-fourth cent per pound.

A slight decrease is reported in the number of violations during 1913, there being a total of 1,745 cases as against 1,779 in 1912. These violations involve 1,375 persons and consist of 78 cases of illicit manufacture through addition of artificial coloration to the uncolored product; 46 violations by wholesale dealers for failure to pay tax, keep Government record, or render returns, and 1,251 cases against retail dealers for infractions of the various sections of the law governing the sale of the product by them.

Prosecutions were instituted against 17 illicit manufacturers, 7 wholesale dealers, and 29 retail dealers, or a total of 53 cases, which resulted in the conviction of 6 illicit manufacturers, 1 wholesale and 3 retail dealers. The other 43 cases, with those pending at the beginning of the year, are still before the courts. The remainder were settled by compromise or dropped upon recommendation of the officers. A total of $1,969.24 was collected from fines imposed by the courts; $110,610.52 by compromise, in addition to which $62,383.26 on account of special taxes and $122,999.69 stamp taxes were assessed on account of these violations.

The present oleomargarine law is not satisfactory either from an administrative or revenue standpoint, and should be so amended as to remedy it in both respects.

Considerable comment has, in the past, been made in the matter of the production of illicit spirits and the consequent loss to the Government of taxes on that product, and while it is true that the Government sustains quite a loss on this account, it is not to be compared with the loss that may be and has been sustained in the illicit traffic in oleomargarine. In any of the three or four large cities of the country, the Government, unless the illicit traffic in the manufacture and sale of oleomargarine is controlled, will lose more taxes from this source than would be lost in the way of taxes on distilled spirits illicitly produced in all the Southern States.

A law imposing a flat tax of a nominal rate without any differentiation based upon coloration with provision for individual stamped or original packages of certain sizes adequately marked and branded, and safeguarded by the proper penalties, would, in my opinion, be easier of enforcement and yield greater revenues than the present law and with less expense to the Government.

ADULTERATED BUTTER.

During 1913 there were reported 105 cases of the manufacture of adulterated butter; 9 wholesale and 3 retail dealers in this product, a total of 117 arising under the act of May 9, 1902, which involved the collection of special and stamp taxes amounting to $54,189.72, an increase of $8,087.32 in collections from this source during the fiscal year 1913.

Practically all of these cases grew out of the manufacture and sale of butter containing moisture of 16 per cent or more.

This law, which was apparently intended to prevent the manufacture and sale of butter adulterated within the common meaning of the term, has because of its definitions and drastic provisions brought about very unfortunate conditions through its enforcement. It has increased the work of officers in the field and this bureau without any appreciable revenues and at the same time has imposed hardships upon many who produced and sold butter which was afterwards found to contain abnormal moisture, thereby involving themselves as well as dealers handling the product in liabilities to the heavy special taxes provided by the law. In many instances of small manufacturers the collection of these taxes has been so oppressive as to practically cause their bankruptcy.

RENOVATED BUTTER.

A decrease is shown in the production and withdrawal taxpaid of renovated butter during the fiscal year ended June 30, 1913. There were 38,354,762 pounds produced and 38,285,114 pounds withdrawn taxpaid, as against 46,387,398 pounds produced and 46,413,895 pounds taxpaid during 1912, this being a decrease of 8,032,636 pounds and 8,128,781 pounds in these items.

* * * * * * *

STAMPS.

During this fiscal year 3,866,661,646 internal-revenue stamps of all classes and denominations were shipped to collectors of internal revenue. Of this number, 3,859,501,446 represented a face value of $321,493,589.55. There was an increase of 283,482,022 in the number, and an increase of $5,010,602.43 in the face value of stamps delivered to collectors during the year. Stamps having no face value were delivered to the number of 7,160,200. These included stamps for rectified spirits, wholesale liquor dealers' packages, distillery warehouse stamps, etc.

REVENUE AGENTS.

The revenue agents and field officers who have been assigned to duty under their direction during the past fiscal year have maintained the high standard that has prevailed in the past, and are deserving of high commendation.

Illicit distilling continued with a slight abatement. During the past fiscal year there were seized and destroyed 2,375 illicit distilleries, as against 2,466 during the preceding year.

Bootlegging is principally carried on in States operating under the local prohibition laws and appears to be one of the hard propositions to solve by internal-revenue officers. The bootlegger is at no time stationary, but moves from place to place, offering and selling his illicit wares. It is impossible, owing to the limited number of revenue officers in the field, to break up this practice, and without the hearty cooperation of the local and State authorities, it is believed that the conditions will grow no better.

RECOMMENDATIONS.

Several recommendations for statutory changes have been made from year to year in the various annual reports, but inasmuch as the need of the legislation referred to is very great, I have the honor again to include some of those recommendations, with certain others, as follows:

1. Denatured alcohol.—To impose a nominal tax—say, 1 cent per proof gallon—on all alcohol withdrawn for denaturation, which tax would yield a return approximately equal to the amount that should be appropriated to properly take care of the work.

2. Tobacco.—The recommendation is here renewed that section 3360 of the Revised Statutes be amended to require every dealer in leaf tobacco to give bond, make a true inventory of stock annually on the 1st day of January in each year, and to render a report of his transactions quarterly, monthly, or for such periods as the Commissioner of Internal Revenue may prescribe. Section 35, act of August 5, 1909, should also be amended so as to require retail dealers in leaf tobacco to give bond, and section 26, act of October 1, 1890, to require registry of manufacturers of cigars, manufacturers of tobacco, dealers in leaf tobacco, retail dealers in leaf tobacco, and peddlers of tobacco only on commencing business and not annually on the 1st day of July in each year, as at present.

3. Oleomargarine.—A complete revision of the oleomargarine statutes is strongly recommended, imposing a flat tax of a nominal rate without any differentiation based upon coloration, etc. This matter has been discussed in detail under the heading "Oleomargarine."

4. Adulterated butter.—A complete revision of the laws relating to the manufacture and sale of adulterated butter, making a change from the moisture test to a butter-fat test.

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Respectfully,

W. H. OSBORN,
Commissioner of Internal Revenue.

Hon. W. G. McADOO,
Secretary of the Treasury.

ABSTRACTS OF REPORTS OF BUREAUS AND DIVISIONS.

The following is a summary of the reports of other bureaus and divisions of the Treasury Department for the fiscal year ended June 30, 1913, with the exception that the figures in relation to public moneys and loans and currency are brought to November 1:

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MINT SERVICE.

Operations of the mints.

The three coinage mints at Philadelphia, Denver, and San Francisco, and nine assay offices, located at New York, Charlotte, New Orleans, Deadwood, Helena, Seattle, Boise, Salt Lake City, and Carson City, were in operation during the fiscal year,

The original deposits of gold at all of the offices of the mint service during the year amounted to $161,131,878.30. The total coinage of the year amounted to $37,496,529.70, of which $30,058,227.50 was gold, $3,448,199.75 was silver, $2,861,768.55 was nickel, and $1,128,333.90 was bronze.

The purchases of silver during the year amounted to 1,779,992.99 ounces, costing $1,086,347.87, at an average cost of 61 cents per fine ounce. The seigniorage on subsidiary silver coins during the year amounted to $1,618,475.17, and the seigniorage on the minor coin amounted to $3,584,520.03, all of which was duly accounted for and turned into the Treasury.

The mint at Philadelphia during the year also coined 803,348 pieces of silver for the Government of Costa Rica, and the mint at San Francisco coined 2,638,820 pieces of silver and 5,001,000 bronze pieces for the Philippine Islands government.

Appropriations, earnings, and expenditures.

The total appropriations available for the mint service during the last fiscal year were $1,243,355.43, and, together with reimbursements within the service and by other Government services, aggregated $1,287,613.04. The actual expenditures amounted to $1,171,600.77. The earnings and gains realized by the Treasury from the mint service, including seigniorage and the expenditures and losses on the same account, are shown by the following statement:

Earnings and expenditures, fiscal year 1913.

EARNINGS.

Mint charges	$291,198.23
Seigniorage on silver coinage	1,618,475.17
Seigniorage on minor coinage	3,584,520.03
Profits on medals and proof coins	2,971.07
Medals furnished Government departments	9,625.57

Surplus bullion recovered	$44,695.27
Surplus bullion recovered (minor)	10.45
Sale of old material	1,713.66
Receipts for special assays	3,496.40
Work for other Government institutions	4,538.71
Foreign coinage charges	30,093.33
By-products	69,735.03
Gain on bullion shipments	523.30
Total	5,661,596.22

EXPENDITURES.

Salaries of officers and clerks	$273,494.78
Wages of workmen	626,537.43
Contingent expenses, less amount to reimburse wastage and loss on sale of sweeps	194,184.34
Wastage of operative officers	19,564.68
Loss on sweeps sold	7,032.61
Expense of distributing minor coin	24,692.95
Freight on bullion and coin	23,696.23
Loss on recoinage, minor coinage	6,330.88
Total	1,175,533.90

Deposits, earnings, and expenditures by institutions.

The deposits, earnings (including seigniorage), and expenditures of each office of the mint service during the fiscal year 1913, and the number of employees in each, are shown in the following table:

Institution.	Number of—		Value of gold and silver deposits.	Earnings.	Expenditures.[1]	Freight on coin and bullion.	Employees.
	Deposits.	Redeposits.					
Philadelphia	4,622	184	$12,926,883.73	$3,648,421.97	$469,532.54	$5,211.40	327
San Francisco	7,780	90	55,152,050.60	517,707.11	192,543.45	.....	114
Denver	3,723	1,248	37,645,870.86	1,283,418.78	183,413.27	.....	94
New York	13,324	171	67,374,598.71	166,641.53	191,119.17	.....	90
New Orleans	596	.....	956,607.73	5,250.70	18,535.76	1,451.57	14
Carson City	891	.....	735,085.95	3,072.10	14,160.55	979.38	7
Boise	957	.....	1,022,087.29	3,908.21	14,868.80	1,103.13	9
Helena	669	.....	1,521,620.87	6,438.97	18,500.13	1,620.50	9
Charlotte	143	.....	29,428.30	1,107.70	2,661.06	35.05	.....
Deadwood	426	.....	7,388,284.97	13,208.24	14,394.33	3,804.00	6
Seattle	1,558	.....	4,976,444.91	10,875.19	41,371.94	8,802.65	19
Salt Lake City	300	.....	600,632.02	1,761.69	14,648.87	688.55	8
Total	34,989	1,693	190,329,595.94	5,661,812.19	1,175,749.87	23,696.23	697

[1] Includes freight on shipments of coin and bullion between mints and assay offices.

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Production and consumption of gold and silver.

The production of gold in the United States for the calendar year 1912 is estimated by the Bureau of the Mint, in conjunction with the Geological Survey, at 4,520,719 fine ounces, of the value of $93,451,500, and the production of silver is estimated at 63,766,800 fine ounces, of the commercial value of $39,197,500. The industrial consumption of new gold in the United States during the year is estimated at $35,870,552. The industrial consumption of silver for the year is estimated at 22,644,821 fine ounces.

BUREAU OF ENGRAVING AND PRINTING.

The appropriations by Congress for this work amounted to $3,687,206.39, and the repayments received for services and materials furnished the several executive departments and bureaus were $859,200.99, the aggregate available for the work during the year having been $4,546,407.38. The expenditures were $210,174.15 for salaries, $1,695,811.32 for compensation of employees, of which $2,250 was for employees detailed to other branches of the public service and not reimbursed; $1,880,314.75 for wages of plate printers and assistants; and $663,431.92 for materials and miscellaneous expenses, making an aggregate expenditure of $4,449,732.14.

The work executed by the Bureau of Engraving and Printing during the fiscal year was 9.4 per cent more than in the preceding year, while its expenditures increased only 3.35 per cent. The total number of sheets delivered was 287,192,192, an increase of 24,763,453 over the previous year. The deliveries comprised 76,797,500 sheets of United States notes and certificates; 34,869 sheets of United States bonds; 12,508,747 sheets of national-bank notes; 79,472,550 sheets of internal-revenue stamps; 255,300 sheets of customs stamps; 100,490,096 sheets of United States postage stamps; 14,223,835 sheets of United States parcel-post stamps; 218,868 sheets of Philippine postage stamps; 354,600 sheets of silver certificates, documentary and internal-revenue stamps, postal cards, and checks on Treasurer for the Philippine Islands; and 2,835,827 sheets of checks, drafts, commissions, etc. In addition to these sheets delivered, miscellaneous work was executed to the value of $93,552.52. The face value of all classes of securities, internal-revenue stamps, postage stamps, etc., delivered by the bureau amounted to $2,060,409,515.

Compared with the deliveries in the fiscal year 1912, there was an increase of 1.73 per cent in United States notes, certificates, and bonds, 6.65 per cent in national-bank notes, 5.45 per cent in internal-revenue stamps, 43.06 per cent in customs stamps, 18.91 per cent in postage stamps, and 7.04 per cent in checks, drafts, etc.

Improved machinery.

By authority of the act approved August 24, 1912, during the year the printing of checks was transferred from hand-roller plate printing presses to offset presses at an annual saving of $30,000, and the printing of one-fifth of the backs of paper money was transferred from the hand presses to electric-power plate presses at a saving of $90,000. On July 1, 1913, the number of power presses engaged in printing backs was increased from 16 to 30.

Money laundering.

Eleven machines for cleansing paper money were installed in the offices of the Treasurer of the United States and of several assistant treasurers, in the belief that the reuse of the laundered notes would result in considerable economy due to the reduction in the number of new notes necessary to be issued, but indications now are that the anticipated results will only be partly realized.

New building.

The new building to house the Engraving and Printing Bureau is nearly completed and some portions of the work of that bureau are expected to be commenced therein by February 1, 1914.

It is estimated that the use of the old bureau building by the auditors of the department, instead of renting buildings, will result in annual saving to the Government of $35,750.

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OFFICE OF THE SUPERVISING ARCHITECT.

The work in the Supervising Architect's office during the past fiscal year has been carried on in accordance with policies previously established.

The year ending June 30, 1913, was the first completed fiscal year following the material reduction in the force in the office of the Supervising Architect in October, 1911. Through the elimination of unnecessary routine, this reduced force has accomplished a proportionately larger output of construction work than was accomplished during the preceding fiscal years. The experience of the year just closed, however, shows that the force, as reorganized, is not properly balanced, and does not handle the present output in the most efficient manner.

The public buildings act, approved March 4, 1913, created a commission to present to Congress a connected scheme of annual appropriations for the construction and completion of public buildings already authorized, to frame a standard for the determination of the size and cost of buildings, etc. In view of the existence of this commission, and the probability that Congress will take action upon the report which it will submit, no recommendations are made at this time concerning the work of the office of the Supervising Architect.

The work authorized in the omnibus public buildings act of 1910, and not under contract, together with the work authorized in the act of 1913, placed in this office a very large volume of work at the close of the fiscal year ending June 30, 1913.

The tabulations given below show in summarized form the status of projects authorized by Congress and the financial operations of the office.

BUILDINGS.

Buildings completed and occupied at the close of the preceding fiscal year, June 30, 1912, including 50 marine hospitals and quarantine stations	779	
Buildings completed during the fiscal year ended June 30, 1913, including Galveston (Tex.) quarantine station	84	
Buildings placed under contract during the fiscal year ended June 30, 1913, including San Juan (P. R.) quarantine station	63	
		926
Buildings authorized prior to act of Mar. 4, 1913, not under contract June 30, 1913, including Portland (Me.) quarantine station and Key West (Fla.) marine hospital	204	
Buildings authorized in the act of Mar. 4, 1913	304	
		508
Total buildings completed, under contract, or authorized		**1,434**

EXTENSIONS.

Extensions completed during the fiscal year ended June 30, 1913	11
Extensions placed under contract during the fiscal year ended June 30, 1913	16
Extensions authorized prior to the act of Mar. 4, 1913, not under contract June 30, 1913	11
Extensions authorized in act of Mar. 4, 1913	23
Buildings completed during the fiscal year ended June 30, 1913	84
Extensions completed during the fiscal year ended June 30, 1913	11
	95
Buildings placed under contract during the fiscal year ended June 30, 1913	63
Extensions placed under contract during the fiscal year ended June 30, 1913	16
	79
Buildings in course of construction June 30, 1913, including quarantine station, San Juan, P. R.	113
Extensions in course of construction June 30, 1913, including marine hospital, New York, N. Y.	19
	132

Statement of appropriations for public buildings, July 1, 1912, to June 30, 1913.

EXPENDITURES DURING THE FISCAL YEAR.

For statutory salary roll	$85,931.95
For general inspector of supplies	1,106.40
For sites and additional land	701,832.48
For construction of new buildings	10,103,886.19
For extensions to buildings	800,205.33
For special repairs to buildings	366,330.05
For rent of buildings	127,680.08
For repairs and preservation	544,663.21
For mechanical equipment	344,175.95
For vaults, safes, and locks	92,980.17
For operating supplies	1,553,593.94
For electrical protection to vaults	18,020.22
For general expenses	641,539.96
For furniture and repairs of same	720,514.85
For furnishing new post office, customhouse, and courthouse at Cleveland, Ohio	6,651.66
For operating force	2,131,205.44
For lands and other property	37.50
For architectural competitions	55,998.28
Total	18,296,353.66

CONTRACT LIABILITIES EXISTING ON JUNE 30, 1913.

On account of statutory roll		$3,493.85
On account of sites and additional land		215,711.00
On account of construction of new buildings	$11,514,274.51	
On account of extensions to buildings	2,500,709.56	
On account of special repairs to buildings	216,721.84	
	14,231,705.91	
Less authorized contract liabilities in excess of amounts appropriated	558,572.86	
		13,673,133.05
On account of rent of buildings		101,198.52
On account of repairs and preservation		275,770.81
On account of mechanical equipment		211,110.93
On account of vaults, safes, and locks		51,273.24

On account of operating supplies	$221,828.79
On account of electrical protection to vaults	4,438.50
On account of general expenses	78,692.52
On account of furniture and repairs of same	345,248.01
On account of operating force	362,534.65
On account of architectural competitions	12,118.08
Total	15,556,551.95

BALANCES AVAILABLE JULY 1, 1913.

For statutory salary roll	$237,350.09
For general inspector of supplies	349.93
For sites and additional land	1,167,273.97
For construction of new buildings	11,669,301.31
For extensions to buildings	1,121,698.42
For special repairs to buildings	451,421.74
For rent of buildings	242,507.67
For repairs and preservation	685,456.48
For mechanical equipment	448,486.53
For vaults, safes, and locks	100,951.06
For operating supplies	1,735,823.99
For electrical protection to vaults	26,633.53
For general expenses	542,467.83
For furniture and repairs of same	922,080.99
For furnishing new post office, customhouse and courthouse, Cleveland, Ohio	10,815.04
For operating force	2,975,097.10
For lands and other property	853.45
For architectural competitions	106,883.64
Total	22,445,452.77
Less unexpended balances of annual appropriations whose availability expired with the fiscal year ended June 30, 1913	546,870.02
Available for authorization and expenditure during fiscal year ending June 30, 1914	21,898,582.75

PUBLIC HEALTH SERVICE.

The Surgeon General reports the operations of the service through the seven administrative divisions of the bureau as follows:

Division of Scientific Research.

The scientific investigations authorized by law have been carried on during the year as facilities would permit. While the work has increased, both in the laboratories and in the field, the providing of funds on June 23, 1913, to enforce the act of August 14, 1912, authorizing larger investigations of the diseases of man and matters pertaining to the public health, marks a new era in this direction.

Comprehensive investigations of trachoma, pellagra, malaria, tuberculosis, typhoid fever, and other diseases, pollution of navigable waters, sanitary administration, school sanitation, and hygiene of occupation are accordingly being planned and executed.

In accordance with an act of Congress approved August 24, 1912, an extensive investigation was made of contagious and infectious diseases among the Indians. Fourteen officers were engaged in the work, 25 States were visited, and a total of 39,231 Indians examined. All the data which were collected, and which showed a high prevalence of trachoma and tuberculosis among this class of the population,

were analyzed and embodied in a report which was submitted to Congress January 23, 1913, and published as Senate Document 1038, Sixty-second Congress, third session.

The investigations of pellagra have been continued at the marine hospital at Savannah and elsewhere during the year. This complex problem will require enlarged systematic studies, and with the funds available measures are being developed to carry them on. The general prevalence of the disease has been outlined and it has been shown to be on the increase.

Systematic studies of malaria, begun at the marine hospital at Mobile and elsewhere, have been continued to ascertain the prevalence of the disease and to stimulate measures for its prevention, a preliminary survey of the State of Alabama having been made and the results published. This survey is being extended to other States and intensive studies are being conducted in heavily infected districts to determine the index of infection and the influence of quinine as a prophylactic.

On account of the announcements of discoveries of alleged cures for tuberculosis and their bearing on the public health, important investigations of them have been undertaken. Studies of the Friedmann treatment were sufficiently advanced by May 16, 1913, to justify a report that the observations made up to that time did not warrant the confidence in the remedy which had been inspired by widespread publicity. This investigation is being continued, as are also studies of other preparations claimed as cures.

The demonstration of the undue prevalence of trachoma among the Indians and among the mountaineers of Kentucky has necessitated the undertaking of surveys to ascertain the prevalence of the disease among school children in California, Minnesota, Tennessee, Virginia, and West Virginia, and clinics have been established in two counties of Kentucky to demonstrate the eradicability of the infection from among infected populations.

The widespread prevalence of poliomyelitis (infantile paralysis) necessitated the continuation of epidemiologic studies of this disease in Arkansas, New York, and Texas, and laboratory studies in Washington. Studies of typhus fever were also conducted.

The investigations of typhoid fever which have been a prominent part of the research work of the service since 1906 were continued. Epidemics were investigated at Fort Dodge, Iowa, other Iowa and Illinois towns, and Roanoke, Va., and systematic studies of the disease conducted in the rural communities of the last-named State.

Pollution of navigable waters.—The sanitary surveys of interstate and international waters were continued. A preliminary survey of the lower Missouri watershed was completed and the results published. Cooperation was rendered the International Joint Commission in its investigations of the boundary waters between the United States and Canada, and systematic investigations are now being made of the pollution of the Ohio and Potomac Rivers to the end that measures may be devised for its control.

In the enforcement of the act of July 1, 1902, regulating the propagation and sale of biologic products, 25 establishments were inspected, 111 relicensed, and 6 licensed for the first time, while the issue of licenses to the remaining establishments was under consideration at the end of the fiscal year.

The Eleventh Annual Conference of State and Territorial Health Authorities with the Public Health Service was held in Minneapolis, Minn., June 16, 1913. The service was also represented at a number of important meetings of scientific and public health associations, and assisted the officers of the International Congress of Hygiene and Demography in promoting the interests of the congress and exhibit which were held in Washington September 23–28, 1912.

Hygienic Laboratory.—The work of this research institution has progressed as space and available facilities would permit. Special studies were made of typhus fever, cholera, and infantile paralysis. Other experimental work in the laboratory related to disinfectants, standardization of drugs, and examinations of public health specimens. The studies of the nutritive value of pasteurized and raw milk were continued.

Supplies of antityphoid vaccine and antirabic treatments have been prepared, the former for use of beneficiaries of the service and during epidemics, and the latter for issue to State health authorities and for administration at the laboratory to persons bitten by rabid animals.

The increasing importance of this institution as an agency in public health work necessitates provision for an additional building and for an increase of the laboratory staff.

Leprosy investigation station.—The investigations of leprosy in Hawaii have been continued at the receiving station at Kalihi and the leprosy settlement on Molokai. As adviser to the Territorial authorities, the director of this station has rendered important service in the improvement of sanitation, especially in respect to the suppression of mosquitoes in and around Honolulu.

In order that the research work shall be properly developed, it should be supported by adequate funds, and the personnel to carry it on should be increased.

Division of Foreign and Insular Quarantine and Immigration.

Quarantine operations during the year have been active under two general headings, one being the work of eradicating rats from vessels and the other being special precautions against the introduction of yellow fever from Mexican ports into the ports of the United States.

In connection with rat-eradicative work, 1,737 vessels have been fumigated at Federal quarantine stations during the fiscal year just ended. This does not include the number of vessels fumigated by State and local quarantine authorities in compliance with our national quarantine policy. Anticipating the appearance of yellow fever in or near certain of the coast cities of Mexico (bordering upon the Mexican Gulf), the usual quarantine measures against the introduction of this disease into the United States were instituted early in the season. The subsequent appearance of yellow fever in certain localities in Mexico has justified these precautionary measures. Neither plague nor cholera has in itself caused special quarantine activity during the year.

The bubonic plague was eradicated both from the ports of Habana, Cuba, and San Juan, Porto Rico.

At the 50 quarantine stations on the continental United States, 7,821 vessels, carrying 599,955 passengers and crews, were inspected

and 113 vessels were disinfected. In addition to these, as mentioned above, 1,737 vessels were fumigated for rat or mosquito destruction. National quarantine has been administered as usual at 8 ports in the Philippine Islands, 8 in Porto Rico, and 7 in Hawaii. Officers have been stationed in the American consulates of the principal ports of Italy and Mexico and in Asiatic ports to enforce the Treasury foreign quarantine regulations. Inspection has been maintained as usual on the Mexican border.

The quarantine stations are at present in a very satisfactory condition as to equipment and preparedness.

Medical inspection of immigrants.—During the fiscal year 1,574,371 aliens were inspected and 38,558 were certified for rejection on account of physical or mental defects. Inspections were conducted at 80 stations in the United States, Hawaii, and in the Philippines. Service officers, under the supervision of commissioners of immigration, have conducted the large immigrant hospitals at Ellis Island, N. Y., and Angel Island, Cal. The staff of medical officers and the corps of attendants at the Ellis Island immigration station have been added to during the year.

The following comparison of work done during the fiscal year just passed and the fiscal year ended June 30, 1912, is interesting. During the last-mentioned period 726,040 immigrants arrived at the port of New York. During the fiscal year just closed 1,044,057 immigrants arrived. The total rejections at that port for the fiscal year ended June 30, 1912, were 17,067 as compared with 22,733 for the fiscal year just ended, 150 mental defectives having been certified during the fiscal year 1912 as compared with 661 for the fiscal year 1913. This increase of activity in the medical inspection of aliens entering the United States is not confined to New York, but is evident at all the other immigration stations. At the Ellis Island hospital during the year past 10,165 patients were admitted for treatment, the daily average of patients in hospital being 229.

Division of Domestic (Interstate) Quarantine.

Plague-suppressive measures in California and near-by States were carried out during the fiscal year in accordance with the plan which was outlined in the last annual report of the Surgeon General.

In San Francisco the work of destroying rats was continued, more than 90,000 having been collected and forwarded to the Federal laboratory for bacteriological examination. Throughout the year 1913 no rats were reported plague infected or suspicious of plague.

During the fiscal year particular attention has been given to rat-guarding of ships engaged in trans-Atlantic and Pacific trade and calling at San Francisco. The regulations of the department in this regard have been strictly enforced.

Operations in Oakland and Berkeley have consisted solely of the trapping of rats for the purpose of determining whether plague infection had appeared, as plague infection has existed for some time among the ground squirrels that infest the rural districts surrounding these cities. Rats to the number of 40,000 were collected and sent to the laboratory for examination. No plague infection was found.

The squirrel-free zone around the cities bordering upon San Francisco Bay was maintained throughout the year. Whereas in previous

years plague infection had been demonstrated among the squirrels upon this zone, careful hunting has failed to discover any infection during the year just passed, though infection has been found in contiguous territory.

But one case of human plague occurred during the fiscal year 1913. The patient died June 13, 1913. As infected squirrels had been found in the immediate vicinity and no rats were discoverable about her residence, it is believed that the infection was obtained from ground squirrels.

On June 17, 1912, the presence of bubonic plague was reported in San Juan, P. R. Officers were ordered to Porto Rico for the purpose of suppressing the epidemic. This work has been accomplished, and these officers will be withdrawn very shortly.

On the request of the secretary of the Department of Public Health of Montana an officer was directed to proceed to Montana for the purpose of taking charge of the eradication of Rocky Mountain spotted fever, a disease which is widely distributed throughout the Pacific States and which exists in virulent form in the Bitter Root Valley of Montana. The disease has been successfully combatted in the latter region.

The occurrence of two cases of leprosy in persons who had resided in Michigan for some years brings again to general attention the need for a definite policy which will act uniformly throughout the country for the control and segregation of lepers.

The Surgeon General was directed to cooperate with State and local health officers of Ohio and Indiana during the disastrous floods which occurred in the spring of 1913. He not only directed his own officers in the field, but aided the local authorities with timely advice on sanitation.

On request of the Secretary of the Interior an officer was detailed to investigate sanitary conditions in Alaska and to make reports and recommendations thereon.

Amendments to article 3 of the Interstate Quarantine Regulations have been made relating to the common drinking cup, the common towel, and pure drinking water and ice for passengers in interstate traffic. These regulations have met with very general acceptance and have resulted in a marked improvement in sanitary conditions on interstate carriers.

In order that there might be a standard from which to judge of the purity of water and ice supplied passengers, a commission has been appointed, consisting of eminent scientists, together with officers of the Public Health Service, for the purpose of determining a standard of purity for drinking water. This commission is still at work, and its report is expected at an early date.

A great forward step has been made in protecting the health of passengers traveling on common carriers in interstate traffic. In addition to amendments to the Interstate Quarantine Regulations inspection reports from service officers traveling on official duty as to sanitary conditions on trains and vessels have been regularly received. When poor sanitary conditions are observed, notification of such conditions is rendered to the officials of the railroad or steamship line. In practically all such cases officials have shown a ready willingness to cooperate effectively in remedial measures.

In accordance with Executive order of May 12, 1912, detailed sanitary inspections of Government buildings in Washington are regularly made and a permanent record kept of sanitary conditions in each room in such buildings.

Division of Sanitary Reports and Statistics.

Pursuant to acts of Congress approved February 15, 1893, and August 14, 1912, the Public Health Reports have been issued weekly during the year. They have supplied quarantine officers, health officers, and other sanitarians with current information of the prevalence of diseases dangerous to the public health and of the measures being adopted by State and local health officers to prevent their spread through the adoption of sanitary laws or regulations. The Public Health Reports have also contained information on other related subjects for the use of health authorities in the protection of the health of the people.

To prevent the spread of disease in interstate traffic or from one locality to another it is necessary to have current information of the prevalence of disease and the occurrence of epidemics. This information is secured through the reporting of cases of disease, a subject concerning which many States have enacted laws. For the control of disease in its broader sense and the protection of the lives and conservation of the health of the people it is desirable that uniform and effective requirements be adopted by the several States. This matter has been a subject of careful consideration during the year, and at the Eleventh Annual Conference of State and Territorial Health Officers with the Public Health Service on June 16, 1913, a model State law on morbidity reports was adopted. This law should be enacted by the several States as soon as practicable.

State and municipal laws for the control and prevention of disease have been collated and studied that the department might at all times be informed of the measures being taken by State and local authorities for the prevention of the spread of disease. These laws have been published that municipal and State authorities might keep informed regarding the measures taken by other States and cities and the trend of practical sanitation as shown by the adoption of legislation.

Division of Marine Hospitals and Relief.

During the fiscal year 1913, 50,604 patients received treatment 14,097 being treated in hospital and 36,507 as dispensary or out patients. The hospital patients received a total of 405,944 days' treatment. The service operated 23 marine hospitals, owned by the Government, and maintained 125 other relief stations, where seamen were given hospital and dispensary treatment.

At the sanatorium for consumptive beneficiaries, located at Fort Stanton, N. Mex., 314 patients were cared for during the year. Of these, 121 were discharged, 47 died at the sanatorium, and 146 remained under treatment at the close of the year.

Aid was extended to other branches of the Government in the physical examination of 9,971 persons, of whom 381 were rejected.

In addition, 744 merchant seamen were examined to determine their fitness for shipment on American vessels, of whom 20 were rejected; also 15 foreign seamen, of whom 7 were rejected.

Owing to the small amount of relief work done, the relief station at Morgan City, La., was closed during the year.

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Recommendations.

An increase in the number of commissioned medical officers of the Public Health Service is one of its most urgent needs. Requests for the assistance and advice of experts in the management of epidemics of contagious diseases, in work of sanitation, and to address meetings both of public health organizations and of citizens, have been received from State and local health officers in far greater number than in any previous year of the history of the service. Every effort has been made to meet these requests for cooperation, but in many cases the lack of available officers has prevented the bureau's compliance.

An additional building should be provided for the use of the Hygienic Laboratory in Washington. The work of the laboratory has grown apace with the increase in public health interest and activity throughout the country, and additional duties recently imposed by statute in connection with the investigation of diseases of man, pollution of navigable streams, and problems involved in the sanitation of interstate carriers, render additional accommodations necessary for the work.

Larger editions of service publications, and particularly those of a less technical nature, should be provided for. One of the most important of the bureau's publications is the Weekly Public Health Reports, which contains current information relative to the prevalence and distribution of diseases throughout the United States and the entire world. It is believed that the circulation of this publication should be enlarged to include every health officer and physician actively interested in public health work throughout the country.

One of the essential factors in the conduct of public health work is a thorough knowledge of the occurrence, prevalence, and distribution of disease. It is apparent that to eradicate or to prevent the spread of disease, information must first be had as to where it is present. Provision should be made whereby the Public Health Service can be kept currently informed regarding the prevalence of disease throughout the country. Its information of this nature is largely dependent upon the voluntary cooperation of State and local health authorities. While this cooperation is in many instances all that could be desired, in some others reports are not promptly received. In the estimates for the fiscal year 1915 an appropriation has been requested with which to insure prompt and regular receipt of such information by the employment of persons already in the service of health organizations, whose duty it would be to furnish accurate and prompt transcriptions of all morbidity statistics collected by these agencies.

The continuation of the appropriation "For field investigations of public health matters," provided by Congress for the fiscal year 1914, is of greatest importance. With the establishment of this fund it has been possible for the service to undertake work that has long been deferred. The investigation of the pollution of navigable waters,

particularly those which are interstate in character, is clearly the function of the Federal health agency, while studies of the causes and conditions influencing the spread of disease are of benefit to the country at large, regardless of the locality in which they are conducted.

LIFE-SAVING SERVICE.

The number of documented vessels sustaining disaster during the last fiscal year within the field of operations of the Life-Saving Service was 552. They carried 5,787 persons, of whom 73 were lost. The estimated value of the vessels was $12,128,070, and of their cargoes $2,529,170, making a total value of $14,657,240. Of this amount, $1,721,215 represented the estimated value of the property lost.

There were also involved in casualty during the year 1,191 undocumented vessels—those of less than 5 tons' burden—such as small launches, sailboats, rowboats, etc. These were valued at $965,910 and the loss they sustained is estimated at $41,935. There were on board 3,254 persons, 14 of whom perished.

Shelter and subsistence were afforded at the service stations to 437 persons who were victims of shipwreck and of boating accidents. These were furnished a total of 756 days' relief.

The foregoing data and other information of importance relating to the year's work of the life-saving corps are presented for ready reference in tabular form as follows, the figures pertaining to each class of vessels (documented and undocumented) being given separately:

	Documented vessels.	Undocumented vessels.	Total.
Number of vessels involved	552	1,191	1,743
Vessels totally lost	40	29	69
Persons on board	5,787	3,254	9,041
Lives lost	73	14	87
Persons succored at stations	223	214	437
Days' succor afforded	505	251	756
Value of vessels involved	$12,128,070	$952,310	$13,080,380
Value of cargoes	$2,529,170	$13,600	$2,542,770
Total value of property involved	$14,657,240	$965,910	$15,623,150
Value of property saved	$12,936,025	$923,975	$13,860,000
Value of property lost	$1,721,215	$41,935	$1,763,150

The number of casualties, as shown in the foregoing statement, exceeds that reported for any previous year within the history of the establishment. The value of imperiled property was greater, also, than ever before except for the year 1909. Notwithstanding this, a lower percentage of property loss is not to be found in any former annual summary of service operations. It has been equaled only twice, namely, in 1896 and 1898. The value of property endangered, however, during the first of these two years was approximately $3,000,000 less, and during the last-mentioned year $8,000,000 less, than was imperiled during 1913.

The loss of life within the last year was also exceptionally large, exceeding that of any previous year since the season of 1877–78. It is also widely at variance with the average annual record of fatality

since the introduction of the present life-saving system in 1871, which has been 33. This unusual record was due to two disasters which took place upon the Pacific coast: One, the wreck of the steamer *Rosecrans*, January 7, 1913, off the entrance to the Columbia River, with the loss of 33 of the 36 persons she carried; the other, the destruction of the German bark *Mimi*, April 6, 1913, near the mouth of the Nehalem River, Oregon, with the loss of 16 of the 20 persons on board. In neither of these instances could those who perished have been saved by any human agency. It should be stated, moreover, that all of the life-saving crews present at these wrecks performed valiant service, those engaged at the disaster first mentioned losing two powerful motor lifeboats while making desperate and, happily, successful efforts to rescue two sailors, all that remained alive on board when the rescuers appeared after a search of several hours made for the vessel in an impenetrable fog. The work of the corps upon this occasion was marked by incidents of heroism and devotion to duty that have never been surpassed. It evoked the highest encomiums of press and public, and was specially recognized by the passage of resolutions of commendation by the Legislature of the State of Oregon and the adoption of similar resolutions by various city governments and commercial organizations. Recognition by the National Government was extended to each man who participated in the work in the form of a gold medal, bestowed under authority of the act of June 20, 1874. It is appropriate to state in this connection that none of the instances of loss of life during the year was due to the failure of the corps to perform their full duty.

Sources of assistance to vessels.

Of the 1,743 vessels included in the tabular statement, 1,364, or 78 per cent, valued with their cargoes at $6,032,935, and carrying 5,168 persons, were assisted only by the crews of the service; 307, valued with their cargoes at $7,785,205 and having on board 3,270 persons, were assisted by the service corps, working in conjunction with revenue cutters, wrecking vessels, etc.; 33, valued with their cargoes at $1,353,455, and carrying 376 persons, were assisted only by private agencies; while 39, valued with their cargoes at $451,555, and carrying 227 persons, got out of danger unassisted or suffered destruction before assistance could reach them.

In addition to the services performed by the corps as already set forth, aid was extended to 288 vessels finding themselves in divers situations of need of assistance, though not in immediate danger. The assistance thus afforded consisted largely of emergency piloting, carrying persons to and fro between ship and shore, caring for sick and injured officers and seamen, etc.

Warning signals were given also to 182 vessels running into danger. Of these, 117 were steamers. On 147 occasions these warnings were given in the night. Of course no figures can be furnished showing the value of the vessels so warned or the number of persons they carried. It may be assumed, nevertheless, that the signals were instrumental in preventing the loss of much property and perhaps loss of life as well.

The net expenditure for the maintenance of the service during the year was $2,204,074.50.

Flood service in the Middle West.

The spring of 1913 will be long remembered for its record of casualties due to storm and flood. The effects of high water, felt generally in Ohio and Indiana, extended also to portions of West Virginia, Kentucky, Illinois, Missouri, Tennessee, and other States farther south bordering upon the Mississippi River.

Under personal instructions of the Secretary, given when the news first reached Washington that life was in jeopardy in certain sections of the inundated territory, a number of life-saving crews, with the necessary boats and equipment, was placed at the disposal of State officers and others having charge of relief work. Seven crews in all performed flood service, namely, from the Louisville (Ky.), Cleveland and Lorain (Ohio), Michigan City (Ind.), and Jackson Park, Old Chicago, and Evanston (Ill.) stations. Their work took them to Dayton, Ohio; Covington and Dayton, Ky.; Fort Wayne, Peru, and Terre Haute, Ind.; and Cairo, Ill. The crews of the Cleveland, Lorain, and Louisville stations also rendered valuable assistance to victims of flood in their home cities. The seven crews rescued and succored while in the performance of flood duty a total of 3,509 persons, besides saving personal property, consisting mostly of live stock, to the value of $30,000. A special report describing in detail the operations of the corps in the flooded districts is contained in House Document No. 94, Sixty-third Congress, first session.

Power boats for rescue and salvage work.

From the field continue to come demands for power craft to replace certain of the larger types of service boats propelled by oars. This demand is being met as rapidly as appropriations will allow. At the close of the year 68 self-righting and self-bailing power lifeboats and 58 Beebe-McLellan self-bailing power surfboats (126 boats in all) were in use at the stations, 19 of the type last described having been put in commission during the year. Of the lifeboats, 28 are of the 36-foot length and 40 of the 34-foot length.

The marked growth of late years in the work of the service does not necessarily indicate a corresponding increase in the number of casualties to vessels along our coasts, but rather the ability of the corps, with their improved boats, to cover more territory than formerly. Of the 4,096 endangered persons taken ashore or to other places of safety by the life-saving crews during the year, 2,748 were transported in the power boats of the service.

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REVENUE-CUTTER SERVICE.

The following is a summary of the results of the operations of the Revenue-Cutter Service during the fiscal year 1913:

Lives saved or persons rescued from peril	327
Persons on board vessels assisted	2,755
Persons in distress taken on board and cared for	264
Vessels boarded and papers examined	25,079
Vessels seized or reported for violation of law	850

Fines and penalties incurred by vessels reported	$180,470.00
Regattas and marine parades patrolled in accordance with law	39
Vessels to which assistance was rendered	179
Derelicts and obstructions to navigation removed or destroyed	31
Value of vessels assisted (including cargoes)	$10,607,710.00
Value of derelicts recovered and delivered to owners	$18,900.00
Appropriation for 1913, including appropriation for repairs	$2,474,857.00
Net expenditure for maintenance of the service, including repairs	$2,471,532.51
Estimated unexpended balance	$3,324.49

To accomplish this there have been 25 cruising cutters and 18 harbor vessels and launches actively employed during the year.

The winter season of 1912–13 was of unusual mildness compared with the severe weather of the previous winter; but the occurrence of several gales along the coast, together with accidents to shipping from other causes, called forth the usual vigilance and activity of the fleet of revenue cutters, and the result of these operations of the service during the past fiscal year shows that $10,626,610 worth of property has been saved from the perils of the sea and that there have been 327 lives saved or persons rescued from danger. As the total cost for the maintenance of the service during that period was $2,471,532.51, the year's efforts represents a conservation of $4.29 for each dollar thus invested by the Government.

Notwithstanding the unusually mild weather conditions of the past winter season, the vessels forming the patrolling fleet were kept busily cruising along the coast to aid ships in distress. The vicissitudes which beset seafaring men are of such an unending variety that even when fair weather prevails accidents of one kind or another occur frequently, and usually at the most unexpected time. Hence it is that the officers and men attached to these winter-cruising cutters are under a constant tension, not knowing at what moment their services may be called for in the saving of life and property. During the past winter season the patrol was so vigilant that there is no instance on record where a call for help went unheeded.

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Removal of derelicts.

The duty of searching for and removing derelicts and other menaces to navigation has been continued throughout the year, with the result that 26 of these obstructions have been removed or destroyed, and 5 derelicts, representing a value of $18,900, were recovered and restored to their owners.

Reference was made in the last annual report to the fact that, at the request of the War Department, sunken obstructions to navigation were removed by the Revenue-Cutter Service. Jurisdiction over such obstructions is vested by law in the War Department, and hitherto delays have been occasioned in removing these from the paths of commerce, owing to the official correspondence necessary between the Engineer Corps of the War Department and the Revenue-Cutter Service, whereby the cutters could receive specific authority to act as agents of the Secretary of War for the removal of the obstructions. After conferences with the War Department officials, a set of regulations was agreed upon and promulgated under date of April 2, 1913, which secured close cooperation in these matters, and provided

for the prompt action of the commanding officer of any revenue cutter in the removal of sunken obstructions without preliminary correspondence.

Ice patrol.

The loss of the *Titanic* by collision with an iceberg on April 16, 1912, called the attention of the maritime world to the necessity for providing some systematic means of giving to the trans-Atlantic steamers approaching the regions traversed by the ice in the spring and summer months timely warning as to the exact location of dangerous bergs and fields of ice. The United States Government, always among the first in humanitarian enterprises, maintained an efficient ice patrol by means of two scout cruisers of the Navy during the months of May and June, 1912. No naval vessels were available for this duty during the spring months of the current year, and therefore, at the earnest solicitation of the large maritime exchanges of this country, two revenue cutters, the *Seneca* and *Miami*, were detailed by the Secretary of the Treasury for the patrol of the ice regions.

Using the port of Halifax, Nova Scotia, as a base for coal and supplies, these two vessels made alternate cruises of 15 days in the ice danger zone and maintained a continuous patrol during the months of April, May, and June, 1913. At the end of this period the reports from the vessels indicated that the icebergs and ice floes had ceased to be a menace to the trans-Atlantic steamer lanes, and the patrol was discontinued for the season as no longer necessary.

Protection of the fur seal.

During the months of July, August, and September, 1912, and again in May and June, 1913, an efficient patrol of the Bering Sea and North Pacific Ocean was maintained for the purpose of enforcing the provisions of law and the convention entered into by the United States, Great Britain, Russia, and Japan for the preservation of the fur seal and the sea otter. The cutters employed in 1912 were the *McCulloch*, *Tahoma*, and *Manning*, and for the season of 1913 the *Tahoma*, *Manning*, and *Unalga* were detailed for this duty.

Enforcement of navigation, anchorage, and other laws.

Twenty-five thousand and seventy-nine vessels were boarded and examined during the year in enforcing the navigation and motor-boat laws. Of these, 850 were reported for violation of law, involving fines in the total sum of $180,470. Practically the same number of vessels were boarded in 1913 as in 1912, and the fact that but 850 were found violating the law in 1913, as against 1,208 in 1912, is gratifying evidence of an increasing regard for the requirements of the law on the part of the owners and the masters of vessels.

The duty of enforcing the law and regulations governing the anchorage of vessels in the harbors of New York and Chicago and the Kennebec River has continued during the year. The *Manhattan* and *Guide* were assigned to this work in New York Harbor and the launch *Patrol* in Chicago. The establishment of definite anchorage

areas in these crowded harbors has added materially to the safety of navigation and greatly facilitated traffic in these waters, and the recommendation of last year is renewed, namely, that similar laws governing the anchorage of vessels be enacted for all the large seaports.

The important duty of regulating the movements of vessels through the St. Marys River, Mich., has been continued, requiring the use of the third-class cutter *Mackinac* and two launches. In addition, three lookout stations have been maintained at important points in the river to observe and regulate the speed of passing vessels, and during the past year it has been necessary to establish a fourth station, at Brush Point. All of the commerce between Lake Superior and the lower lakes, aggregating 72,472,676 tons for the season of 1912, must pass through the St. Mary's River and the connecting canal systems. During the season of 1912 the total number of vessels passing through the locks was 19,691, and the greatest number passing through in one day was 124—on September 24, 1912. There was at no time a congestion approaching a blockade, except from ice, on December 12 and 13, and the number of vessels delayed at that time was small.

At the request of the Secretary of Commerce, vessels or officers were detailed in 39 instances to enforce the regulations for the safety of life during regattas or marine parades.

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Service depot in Alaska.

It is recommended that a permanent depot be established either at Dutch Harbor or Unalaska, Alaska, as a base for the operations of the service in northern waters. For many years past one or the other of these places, located about 1 mile apart, has been used as a temporary base for the Bering Sea patrol fleet and other vessels in Alaskan waters; in fact, owing to their geographical location and their safe harbors they are the only ports that can be used for this purpose. As the growing importance of Alaska, the increase in its shipping, and the duty of enforcing the convention for the prevention of pelagic sealing will require such a supply base for years to come, either of these two ports must continue to be so used, and in the interest of economy the Government should have its own station at one of these places for the storage of necessary fuel and supplies.

At the present time coal for the fleet must be purchased practically without competition, since there is but one concern at each of these ports from which fuel can be obtained. During the past 2 years coal has cost at Unalaska $12 a ton and fresh meat 30 cents a pound. The average amounts of these items purchased annually are 4,500 tons of coal and 30,000 pounds of fresh meat. Good coal can be purchased at the mines and delivered at Unalaska for about $7 a ton. Allowing $1 for handling, it will be seen that a saving of $4 a ton, or $18,000 annually, would be effected in the matter of coal alone if the Government had its own station at Dutch Harbor or Unalaska.

There are other Government vessels belonging to other departments which are obliged to coal at Unalaska, and the total saving to the Government annually in the cost of coal would not be less than $20,000.

Dutch Harbor would be the better location, because of its larger harbor, but if the Government could not acquire at a reasonable cost the site at that place, now owned by the North American Commercial Co., consisting of about 40 acres, with wharf, storehouses, and other buildings, a reservation could be had at Unalaska, about 1 mile to the southward, and the wharves and buildings now occupied by the Alaska Commercial Co. could be purchased and put in proper condition.

Saving of life and property on interior navigable waters.

In view of the beneficial results of the activities of the Revenue-Cutter Service in the saving of life and property along the Atlantic, Gulf, and Pacific coasts and on the Great Lakes, the question naturally arises why these benefits should not be extended to the inhabitants and shipping interests along the navigable waters in the great Middle West and Southwest.

The annual overflowing of the Ohio and Mississippi Rivers and their tributaries, the great loss of life and property incident thereto, and the necessity, as evidenced last year, of sending from the Great Lakes and the Atlantic ports skilled men and life-saving apparatus to aid in saving lives in the inundated regions, presents a legitimate field for the operations of the Revenue-Cutter Service. Three typical light-draft river steamers should be constructed and equipped as revenue cutters; each of these craft provided with not less than four powerful motor lifeboats and equipped with such other life-saving appliances as may be necessary for work along the rivers. During the flood seasons these cutters should be directed to follow the crest of the flood from Pittsburgh down to the mouth of the Mississippi, and there is but little doubt that their services would be of great value in rescuing lives and property and in distributing food and clothing to marooned people. During flood times surgeons could be detailed to the cutters to render medical aid where needed. During the periods when floods are not raging, the three cutters could be very efficiently used in patrolling these inland waters for the enforcement of the navigation and motor-boat laws and in rendering aid to vessels in distress.

Headquarters should be assigned to these cutters at Louisville or Cincinnati on the Ohio, at St. Louis on the upper Mississippi, and at Helena, Ark., or Vicksburg, Miss., on the lower Mississippi.

Cutters of this type can be constructed and properly equipped for $80,000 each, or a total of $240,000 for the three. The annual cost of maintenance would be approximately $80,000 for the three cutters, a small sum to expend for the saving of life and property when compared with the vast sums annually lost through these floods.

This matter is earnestly submitted for consideration.

Appointment of cadets.

Some relief from the critical situation regarding the recruiting of its commissioned personnel, which confronted the service during the past year, was afforded by a clause in the sundry civil bill for the fiscal year 1914, which provided for the appointment of 7 cadets during the current year. Even with these 7 appointments, there still

exist 7 vacancies which can not be filled at the present time. It is therefore earnestly recommended that 7 additional cadetships be authorized for the fiscal year 1915, making a total of 14 cadets and cadet engineers for that year. It is also urged that in 1916 permanent authorization be made for 21 cadets and cadet engineers. The record of the past shows that 7 cadets is the average number needed each year to fill vacancies, and as three years is the maximum period of probation for cadets, there should be 21 cadets and cadet engineers under instruction all the time to provide for the vacancies which occur in the authorized personnel of 242 officers of all grades.

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REPORT

OF

THE SECRETARY OF WAR.

War Department,
Washington, D. C., December 11, 1913.

To the President:

Sir: I have the honor to submit the following report of operations of this department during the past year:

During recent years the duties imposed upon the War Department have been appreciably increased by the addition thereto of administrative supervision and control in matters relating to our so-called "insular possessions" and to the construction of the Panama Canal. The scope and extent of War Department activities as thus enlarged and broadened make it physically impossible for anyone within a few months' time to get much more than a bird's-eye view of affairs, and while early impressions may prove to be fundamentally sound and correct, I have felt it prudent to limit my first report largely to matters of most pressing moment and concerning which previous discussion has cleared the air and brought about a substantial consensus of opinion, or at least crystallized it into definite forms.

During the brief period that I have been Secretary of War I have visited nearly every post within the continental limits of the United States, and the Canal Zone, and by these visits and by conversations with officers, enlisted men, and others have acquired information and impressions which I am weighing and correlating as rapidly as practicable with the pressure of current business, and I shall endeavor from time to time to give effect to the final conclusions thus reached when, and so far as, occasion calls for it and circumstances permit.

While the War Department functions through Army instrumentalities in practically all of its operations and activities, I shall divide my report for convenience of consideration into four general heads—"The Army," "Insular Affairs," "Panama Canal," and "Civil affairs."

THE ARMY.

The act of February 2, 1901, limits the President's authority to a total enlisted force in the Army of not exceeding 100,000 men at any one time, including the Philippine Scouts.[1] Within this statutory limit the authorized enlisted strength of the Army is fixed from time to time, as needs may vary, by Executive order.

Authorized strength.

On July 1, 1913, the authorized strength of the Regular Army was 4,763 officers[2] and 84,810 enlisted men,[3] a decrease of 49 officers and an increase of 3,401 enlisted men over the preceding year. In addition the authorized strength of the Philippine Scouts was 180 officers and 5,732 enlisted men, the same as during the preceding year.

Actual strength and distribution.

On June 30, 1913, the actual strength of the Regular Army was 79,986—4,665 officers[2] and 75,321 enlisted men. This was an increase since June 30, 1912, of 195 officers and a decrease of 2,514 enlisted men. In addition to this, the actual strength of the Philippine Scouts on June 30, 1913, was 180 officers and 5,403 enlisted men, a decrease during the year of 77 enlisted men, the number of officers remaining the same as last year. On that date the Army, including the Philippine Scouts, was distributed geographically as follows:

	Officers.	Enlisted men.	Total.
In the United States	3,680	54,626	58,306
In Alaska	53	1,052	1,105
In the Philippines:			
Regular Army	446	10,297	10,743
Philippine Scouts	180	5,403	5,583
In China	41	1,166	1,207
In Porto Rico	33	585	618
In Hawaii	271	6,418	6,689
In the Isthmian Canal Zone	51	835	886
Troops en route and officers at other foreign stations	90	342	432
Total	4,845	80,724	85,569

[1] The authorized number of commissioned officers is fixed by statute.

[2] Including 103 first lieutenants of Medical Reserve Corps on active duty.

[3] By General Orders, No. 19, 1913, and other minor changes. These figures include the 403 quartermaster sergeants of the Quartermaster Corps authorized by law, but do not include the authorized enlisted strength of the Quartermaster Corps (6,000) nor of the Hospital Corps (3,500), which under the law are not to be counted as a part of the enlisted strength of the Army.

[4] Not including 3,417 enlisted men of the Hospital Corps and 3,047 enlisted men of the Quartermaster Corps.

Comparison of authorized and actual strength.

The following table shows the authorized and the actual strength of the military establishment on June 30, 1913, and June 30, 1912 (not including the Hospital Corps and including only quartermaster sergeants of the enlisted strength of the Quartermaster Corps), together with the

increases and decreases during the year and the number of vacancies on each of those dates:

	Regular Army.			Philippine Scouts.			Total.		
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.
Authorized strength:									
June 30, 1913	4,763	84,810	89,573	180	5,732	5,912	4,943	90,542	95,485
June 30, 1912	4,812	81,409	86,221	180	5,732	5,912	4,992	87,141	92,133
Increase during year	[1] 49	3,401	3,352	.....	.....	.....	[1] 49	3,401	3,352
Actual strength:									
June 30, 1913	4,665	75,321	79,986	180	5,403	5,583	4,845	80,724	85,569
June 30, 1912	4,470	77,835	82,305	180	5,480	5,660	4,650	83,315	87,965
Decrease during year	[2] 195	2,514	2,319	.....	77	77	[2] 195	2,591	2,396
Vacancies:									
June 30, 1913	98	[2] 9,489	[2] 9,587	.....	329	329	98	[2] 9,818	[2] 9,916
June 30, 1912	342	3,574	3,916	.....	252	252	342	3,826	4,168

[1] Decrease. [2] Increase. [3] Includes allowance for unassigned recruits.

Vacancies.

It appears from the foregoing figures that on June 30, 1913, there were 9,489 vacancies in the enlisted strength of the Regular Army. The authorized enlisted strength, however, includes an allowance of not to exceed 4,770 men to provide for an accumulation of unassigned recruits in case all the organizations should be filled at any time to their authorized strength. Making allowance for this emergency provision, the number of vacancies in the authorized enlisted strength of the Regular Army was approximately 4,700, in addition to the 329 vacancies in the Philippine Scouts. There were also 98 vacancies in the authorized strength of officers of the Regular Army.

OFFICERS.

Of the 4,665 commissioned officers on the active list of the Regular Army on June 30, 1913, 1,227 (including 66 chaplains) were general officers or officers of the staff corps and departments, and 3,438 belonged to the line.

One thousand and sixty-five general and staff officers and 2,617 line officers were present for duty, and 162 general and staff officers (13.20 per cent) and 821 line officers (23.88 per cent) were absent from their commands. At the close of the preceding fiscal year 10.10 per cent of the general and staff officers and 27.01 per cent of the line officers were so absent.

Detached.

Of the 983 officers who were absent from their commands on June 30, 1913, 750 were on detached service. Of the officers on detached duty 647, or all but 103, were line officers, and 512 of the 647—about 79 per cent—were captains or lieutenants, as compared with 83.1 per cent the preceding fiscal year.

New officers.

During the fiscal year ended June 30, 1913, and from the close of that year to the present time, 327 second lieutenants have been appointed in the Army—187 from the United States Military Academy, 28 from among the enlisted men of the Army, and 112 from civil life. These appointments leave only 2 vacancies of second lieutenancies in the line of the Army, both in the Coast Artillery Corps.

Retired.

During the fiscal year ended June 30, 1913, 73 officers were placed on the retired list, 10 more than were retired during the preceding fiscal year. The total number on the retired list on June 30, 1913, was 1,030, as compared with 1,017 at the corresponding date the previous year. Of the number retired during the fiscal year 1913, 30 were retired for disability; 22 on their own application; 16 by operation of law, having reached the age limit; 3 by authority of law, having reached 62 years of age; and 2 under special acts of Congress.

Under the act of Congress authorizing the Secretary of War to detail retired officers, with their consent, to certain specified duties, 100 retired officers were under assignment to duty at the close of the fiscal year—1 less than at the close of the preceding fiscal year. Of this number 38 were on recruiting service; 30 were instructors at educational institutions; 22 were detailed with the State militia; 3 were on duty as officers of the Soldiers' Home, Washington, D. C.; 2 on duty as military attachés; 1 at the Army Service Schools, Fort Leavenworth, Kans.; 1 at the Army War College; 1 in charge of Indian prisoners; 1 on duty as a member of the Cavalry Board; and 1 as doorkeeper to the President.

ENLISTED MEN.

The actual enlisted strength of the entire military establishment on June 30, 1913, was about 11.2 per cent below its authorized strength, as compared with 4.5 per cent on June 30, 1912. Of the 127,827 applicants for enlistment and reenlistment only about 20 per cent were accepted, a smaller percentage than during the preceding year, and indicating a continued maintenance of the existing standards of care of selection.

Desertions.

There was an increase of desertions from the Army during the past year, the number aggregating 4,451, which is 4.15 per cent of the whole number of enlistment contracts in force during the year. This percentage, though larger than the

percentage for the three preceding years, is yet smaller than the percentage for any other year since 1901.

The regiments serving in the United States that had the least percentages of desertions were the Tenth and Ninth Cavalry (colored) and the Fifth Infantry. The regiments with the highest percentages of desertions were the Twentieth and Twenty-first Infantry, the Second Cavalry, and the Fourth Field Artillery.

Of the white troops 4.33 per cent and of the colored troops 1.23 per cent were reported as deserters, as compared with 4.15 per cent for the whole Army.

While the cause of desertion has always been shrouded in obscurity, I am convinced that a close and sympathetic relationship between the officer and his men will surely tend to lessen it. I am personally devoting as much of my time as I possibly can to the enlisted man and all that concerns him. Under the guidance of officers who win his confidence and respect, he literally is the backbone of the Army, and if I can find the cause or causes of desertion and they are relievable or remediable, I shall surely do all that lies in my power to apply the proper remedy, as I shall at all times endeavor to impress upon the Army the importance of cultivating that fine bond between company officers and their men which is based upon mutual feelings of respect and comprehension.

MILITARY PRISON ADMINISTRATION.

In furtherance of the policy of the War Department to separate, so far as practicable, general prisoners convicted of offenses punishable by penitentiary confinement from general prisoners convicted of purely military offenses, or of such offenses in connection with misdemeanors, provision has been made in General Orders 56, dated September 17, 1913, for sending to penitentiaries soldiers convicted of offenses punishable under Federal or State law by penitentiary confinement, leaving confined in military prisons only those convicted of military offenses, solely or in connection with misdemeanors.

At military prisons a system has been established whereby men under sentence for military offenses solely, whose record and conduct are such as to entitle them to the privilege, will be afforded an opportunity to receive a special course in military training during a portion of the time that would otherwise be devoted to hard labor, by enrollment in disciplinary companies and battalions under the command of officers specially selected for this duty. Those admitted to these companies are to undergo rigid military training and instruction during one-half of each working day, and hard labor during the other half. The military training is to be intensively thorough and practical, the object being to make the men efficient soldiers from the date of rejoining the service, and expert in some one particular feature of military training. Upon being enrolled in these dis-

ciplinary companies general prisoners are designated by name and not by number, and their prison garb is replaced by an appropriate uniform. It will result from these provisions that such prisoners as are restored to the colors will go back, not stigmatized as men who have worn stripes and numbers or as convicts who have done penal servitude, but as men who have been subjected to a special and rigid régime of military instruction and training, the purpose of which is to supply them with new standards of conduct and to enable them to render efficient service from the moment of rejoining. It is an essential part of the scheme that the conduct of the men so restored shall be carefully watched and reported upon after their return to the service.

The method of dealing with prisoners here outlined is an innovation in our service, though successfully in operation elsewhere. The system prescribed is to a certain extent tentative and experimental, and will be extended or its operation circumscribed in the future as experience may suggest.

MILITARY OPERATIONS.

Mexican Frontier.

At the date of the last annual report there were on duty in connection with the patrol of the Mexican border approximately 6,754 officers and enlisted men. The present strength is about the same, but largely composed of different organizations.

An extensive border patrol has been continuously maintained by these troops from the Gulf of Mexico to Sasabe, 30 miles west of Nogales, Ariz, a distance, following the windings of the frontier, of some 1,600 miles. Throughout this stretch of territory our troops have protected the border from incursions by individuals or small raiding parties from Mexico, have been continually on the alert to prevent violations of the neutrality laws, and have acted in conjunction with the civil authorities to prevent illegal importations of arms and ammunition into Mexico in violation of the President's proclamation of March 14, 1912.

In February, 1913, with the overthrow of the Madero government and the establishment of the Huerta régime, active military operations were promptly inaugurated against the same by the so-called constitutionalists, under Carranza and others. This led to a series of contests for the possession of the border towns, some of which resulted in fighting on the international boundary line. The actions at these towns along the border resulted in a number of Mexican refugees and wounded coming into our hands. The wounded were brought to the American side of the boundary and cared for in civil hospitals and by officers and enlisted men of our medical service.

The duty of our troops at border towns during the conflicts between the two contending Mexican factions was of a most trying nature, and the conduct of the troops under the circumstances, and the exercise of good judgment and self-restraint on the part of commanding officers, are highly creditable.

Gen. Bliss reports that the leaders of the contending forces—

were notified that they must not permit shots to fall on the American side of the boundary and they invariably replied that they would try to observe this requirement. But in spite of this, many shots did fall on the American side and in the American towns and among the American troops. The troops were engaged in keeping back crowds of curious citizen sightseers as well as guarding the border to prevent the use of American territory by the contending parties. The American border towns were filled with refugees from across the line, as practically the whole population of the Mexican towns would cross to American territory until after the fight was over, and these refugees went to swell the number of curious sightseers whom our troops tried to keep out of the zone of danger.

Mobilization of second division.

Under orders issued February 21 and February 24, 1913, the three brigades of the second division with the division staff and divisional troops moved from their regular stations to Galveston and Texas City. The division headquarters is located at the latter place. The strength of the organizations involved in this movement was approximately 11,450 officers and enlisted men.

I am informed that the problem of supplying troops in the field in such a way as to relieve quartermasters with troops from detailed paper work in connection with property responsibility has been successfully worked out by the office of the Chief of the Quartermaster Corps, and that the troops of the second division in the field at Galveston and Texas City, and also the troops along the border of Texas, New Mexico, and Arizona, have been generally supplied amply and expeditiously with the stores and services necessary for their equipment and comfort, and with a minimum of paper work on the part of quartermasters in the field.

HEALTH AND SANITATION.

During the past year [1] the general health of the Army has been better than ever before, both the general admission rates and the daily average number of men sick from all causes for 1912 being less than at any time in the history of the service. Typhoid fever has practically disappeared from the Army; there has been a marked decrease in the number of venereal cases, and the occurrence of malarial fevers among troops in the United States is gradually diminishing.

[1] The calendar year is used for all statistics in connection with health of the Army.

Typhoid fever.

Consequent upon the compulsory immunization of the Army by the typhoid prophylactic only 18 cases of typhoid occurred in 1912 in that part of the Army stationed in the United States, and 5 of these cases occurred in recruits who were infected prior to enlistment. Three deaths occurred in the United States, none of which was in the cases immunized. In the entire military establishment—the Regular Army (including the Porto Rico Regiment of Infantry) and the Philippine Scouts—there were only 27 cases with 4 deaths in 1912, as compared with 69 cases and 8 deaths in 1911, although the results for 1911 were at that time considered very remarkable.

It appears at the present time that the figures for 1913 will be even more gratifying than those for 1912, only one case, that of a recruit, having been reported in the entire military establishment. Among the large number of men in the camps at Texas City and Galveston and in the numerous camps along the Mexican border, constantly exposed to infection, not a single case has occurred. During the last few months, although several cases have been reported in the families of officers, enlisted men, and other civilians at Army posts, not a case has occurred among the military personnel.

Venereal diseases.

As a result of the propaganda of education in the Army, of compulsory prophylaxis with physical examinations, and of the stoppage of pay of men incapacitated for duty by venereal diseases, some control apparently has been secured at last over the occurrence of these diseases. The order from the War Department prescribing compulsory prophylaxis with semimonthly physical inspection was published May 31, 1912, and the act of Congress directing stoppage of pay September 12, 1912. Thus only a part of the year was affected by the two measures. However, before these orders were issued division and post commanders, upon recommendations of chief surgeons and post surgeons, had taken steps which had some beneficial results. The rates for this disease for 1912 were very satisfactory and were even better for the first six months of 1913.

Approximately one year after official action was taken by the War Department and by Congress the admission rate for venereal diseases has been reduced to less than one-half of the average annual rate for the five preceding years.

Tuberculosis.

While there is as yet no measure that can eradicate tuberculosis from the Army as the typhoid prophylactic has typhoid fever, nor control it as the venereal prophylaxis is apparently controlling venereal diseases, yet as a result of improved sanitation and of the care with which applicants for enlistment are examined the rate for tuberculosis is gradually diminishing.

Malarial fevers.

In the United States malarial fevers continue steadily to diminish, but in the Philippine Islands the admission rates for these fevers were higher in 1912 than in any year since 1906.

Alcoholism.

The rate for alcoholism in the United States for 1912 was the lowest since 1873, except that for the year 1898, which for purposes of comparison should not be taken into consideration, as it was a year of war, when such rates are usually low. The rate for American troops in the Philippines also showed a satisfactory decrease. During the year 1913 it is expected that the full benefit of the act of Congress directing stoppage of pay will be seen, and that there will be a still more marked decrease.

Improved camp sanitation.

It is being demonstrated in the camps at Texas City and Galveston that with the present system of camp sanitation troops properly protected by vaccination against smallpox and typhoid fever can live in camps suitably located for an indefinite length of time without increased mortality. Since these camps were established less sickness has occurred there than in the average post. Not a single case of typhoid fever has occurred, nor any epidemic of any infectious disease. The system of the disposal of all excreta and garbage in camps is not only very satisfactory but very simple and inexpensive.

The rate of discharge for disability for the year 1912 is the lowest since the Spanish-American War.

PRIDE IN THE ARMY AND ITS UNIFORM.

The more intimate relations which have prevailed among members of the Organized Militia and the Regular Army due to the operation of laws designed to prepare for the amalgamation and development of these two into one homogeneous body of troops in time of war have done and will continue to do much to stimulate patriotism and to disseminate among our people a better appreciation of the Regular Army and its work. It is believed that the establishment of the military camps of instruction for students will have a tendency in the same direction.

But much remains to be done, not so much to popularize the Army as to fix it at its proper place in the estimation of the people. Not to go further back than the Spanish-American War, we have a record of efficiency in the discharge of a great variety of duties as shown in the establishment and conduct of the military governments of Cuba, Porto Rico, and the Philippines—governments whose establishment and maintenance were accompanied, among other things, by great sanitary reforms, notably in Cuba, where the work resulted in the discovery of the causes and methods of handling yellow fever, and

also in the removal of this tropical scourge from Cuba, thereby rendering its elimination from the southern United States possible. Most of these duties were quite outside the scope of military duties, at least as commonly understood, and often involved the solution of complex, difficult, and intricate problems requiring a high order of intelligence and skill, a broad spirit of humanity, and the exercise of self-restraint and forbearance under most trying circumstances. It is a record of which the Army and the country are justly proud. But the results have been accomplished with so little of noise or display and with such smoothness of execution that the public largely has accepted these achievements in the same spirit that the Army itself has—as part of the day's work.

For some years the Army War College Section of the General Staff and officers generally throughout the service have been working with great earnestness, intelligence, and enthusiasm for the establishment of a definite national military policy, the spread of military knowledge among the people, and the creation of a military reserve force, to the end that there shall be in all the walks of civil life an increasingly larger number of men with a sufficient military training to make them better prepared for the service of their country should the call ever need to be made. The purpose and effect of this have not been to invite war or to encourage it, but rather to prevent or postpone it. It has been but the natural and effective operation of loyalty and patriotism on the part of those whose lives are devoted with rare singleness of mind to the national service.

As a peaceful and unmilitary people, engrossed in the settlement and upbuilding of our vast territory and in the development of the wonderful resources with which it abounds, we are but dimly impressed with the fact that just as agriculture and commerce are the foundations of our great national prosperity, so with equal truth are our military and naval forces its bulwark and defense. While I believe there is a world-wide and growing sentiment for the settlement without bloodshed of all disputes between nations, just as even now there is provision of law for such settlement of difficulties between individuals, I recognize the fact that the time has not yet come when a nation can wisely disarm or slacken its efforts for preparedness in case of war. The Army is not a luxury—it is a public necessity. A nation that is opulent, enterprising, and unarmed as of old still invites aggression, if not disaster. Speaking for that element of the national forces which comes under the control of this department, I hope to see in time of peace a growing sentiment of increased pride in our Army—as the trained and efficient organization to which we instinctively turn for help in times of great national calamity like the San Francisco earthquake, the floods of the Mississippi and Ohio Valleys, and the forest fires, and which has done

such conspicuous public service in the improvement of our great waterways and the building of the Panama Canal—a pride that will make the uniform of officer and enlisted man respected always and everywhere, and not an object of curiosity or invidious discrimination.

USES OF THE ARMY IN NATIONAL CALAMITIES.

I deem it my duty to the country as well as to the Army to invite thoughtful consideration of the magnificent relief work done by the Army during the past year. A brief description of this work follows, but it only faintly pictures the character of this humane service and the promptness and effectiveness with which it was done. We are prone to think of our Regular Army in terms of war only, and not as a national first aid in calamity. Incidents such as these illustrate its power and usefulness in quite the opposite direction and tend to stimulate our pride in the Army and to bring to our minds a new sense of our obligation to the men who thus devote themselves to the national service. We are likely to forget it is *our* Army, composed of our own people and an integral part of the body politic. I fear we too often think of it carelessly, as a thing of infrequent utility, of pomp and pageantry, instead of what it really is, a tremendous silent influence for the preservation of peace and order, and an organized power of priceless value whenever its services are needed.

Floods in Ohio and Mississippi Valleys.

In the early spring of the present year disastrous floods occurring in the tributaries of the Ohio River assumed the proportions of a national calamity. Under your instructions to proceed to the flooded district for the purpose of extending the most effective cooperation of the Government in the measures necessary for the relief of the destitute and distressed sufferers, I left Washington on March 27, 1913, accompanied by Gen. Wood, the Chief of Staff; Maj. Russell, of the Signal Corps; Maj. Rhoads, of the Medical Corps; Maj. Connor, of the Corps of Engineers; Capt. Hartmann, of the Quartermaster Corps; Capt. McCoy, of the General Staff, and Mr. McEntee, from the Telegraph Division of the War Department. We first visited Cincinnati, Ohio, where we made our headquarters, and from there we went to Dayton, Hamilton, and Columbus to make arrangements for the proper organization of relief work.

From the knowledge thus gained at first hand we were enabled to issue the necessary instructions to put into effective operation at once all possible Government aid. All the resources of the War Department were brought into use, Army supplies being drawn upon in the way of tents, subsistence stores, medical and hospital and other supplies, the Engineer Department turning over a large number of steamboats, barges, and other vessels to aid in the work of relief. The

work of distributing the relief was organized and carried out under the general direction of Maj. J. E. Normoyle, of the Quartermaster Corps.

I returned to Washington on April 2, 1913, and with a view to providing against similar disasters in the future, appointed a board of Army Engineer officers to investigate the flood conditions in the valley of the Ohio River and in the drainage area of Lake Erie, and to report upon the most practicable and effective measures for prevention of damage by floods to works constructed for the improvement of navigation, for the prevention of interference with interstate commerce, and of other disastrous results thereof.

The preliminary report of the board, together with an accompanying memorandum from the Chief of Engineers, is published as House Document 246, Sixty-third Congress, first session, and contains information that will be of interest and value to the localities concerned.

The board states in brief that the first requisite for the prevention of interference with interstate commerce, and, indeed, for the protection of the railroads themselves, is the exercise by the United States of control over bridges and their approaches, and is of the opinion that this control should extend to city and county bridges, of which numbers were destroyed by the flood. As under present laws the jurisdiction of the Federal Government is practically restricted to the control of bridges over navigable waters, additional legislation by Congress will be required to extend this Federal control.

While at Cincinnati we got in touch with the Army Engineer officers familiar with the previous history of the waterways of that region. Their knowledge of the situation enabled them to foresee the conditions that would ensue when the swollen tributaries should reach the Ohio River. Guided by information thus obtained, I sent telegrams to the governors of Ohio, Illinois, West Virginia, Missouri, Tennessee, Arkansas, Kentucky, Mississippi, Louisiana, and Indiana, as follows:

I desire to inform you that in anticipation of floods in your State, in those cases where local authorities can not handle the situation and call on Federal Government for assistance, the War Department is gathering men, boats, and supplies along the river and has put Maj. J. E. Normoyle in charge in the field. His present address, City Hall, Cincinnati, care of Mayor Hunt. His aid, Maj. J. A. Logan, jr., is now at Louisville, Ky. I am sure that you will do all that is possible to cooperate, raising all the money and gathering all the supplies that you can, and I would request that you inform the department or one of the above named when and where they can get in touch with your relief agents. Normoyle and Logan are the men who so skillfully and successfully handled the flood conditions last year. As you know the widespread area to be attended makes it impossible for you or for us, or for both together, to meet all the demands as made. It is also true that when the frightened locality sends off its first appeal, it is always for much more than is needed and is very often not for things that are actually needed. In view of this may I suggest the advisability of

your appointing some one responsible head to whom in your State all local appeals should be made and through whom all requests should be made on the department. This will enable us when demands are made from localities to direct them to make them in the first instance to your responsible man and he, knowing local conditions much better than we can, will send to us for what he actually needs. It is obvious that this will result in coordination, will prevent waste, and will insure much more efficient service.

Maj. Normoyle and Maj. Logan promptly established floating bases of supplies on the Ohio River from Marietta, in the east, to Cairo, where the river empties into the Mississippi. They worked in conjunction with the Navy, which had already shipped to the stricken district whole trainloads of provisions in charge of officers who rendered most efficient service. The principal field of operations for the Navy was in the Ohio Valley, but part of their personnel was utilized in the Mississippi Valley as well until cessation of the floods.

All the floating equipment of the Engineer Department—steam and motor boats, flatboats and barges—was pressed into service, and small flat-bottomed boats were hurriedly built for rescue work. The Engineer plants were the principal factors in rescue work this year, as they were during the flood of 1912 in the Mississippi Valley.

There were distributed immense quantities of food, clothing, blankets, tents, shoes, medicines, and other supplies. The work of the Medical Department was of particular value in preventing epidemics and in cooperating with local boards of health in all the States along the river, and by enforcing vaccination and other sanitary precautions they undoubtedly averted epidemics of diseases which usually follow in the wake of such disasters.

After flood conditions in the Ohio River had been brought under control, Maj. Normoyle and his organization proceeded down the Mississippi River and cooperated with the authorities there, as had been done by the Army in the preceding year.

Omaha tornado.

On the evening of Sunday, March 23, 1913, a destructive tornado swept through the city of Omaha, devastating a 5-mile path through the residential portion of the city. The buildings in a large area were razed to the ground and many people were killed and injured. The conditions thus created were beyond the resources of the local authorities and demanded energetic and immediate action by all the agencies available to rescue the injured, care for the dead, and maintain order in the stricken zone. At the request of the mayor, Maj. Carl F. Hartmann, of the Signal Corps, commandant of Fort Omaha, immediately ordered out the officers and men of his command and proceeded to the wrecked district to extend such aid as the Army could render.

The deaths from the tornado numbered about 150 people, and hundreds of others were more or less seriously injured. One thou-

sand seven hundred houses were wrecked and damaged, 642 being a total loss. Approximately 3,300 families were rendered homeless.

At the request of the citizens' committee and the local authorities, Maj. Hartmann was placed in charge of the relief work, and promptly established a systematic scheme for the relief of the sufferers.

In recognition of the timely services, of inestimable value, thus rendered by Maj. Hartmann and the officers associated with him and the men under his command, the thanks of the city were tendered in a formal resolution, and the Commercial Club of Omaha, embracing in its membership 1,800 of the leading business and professional men, forwarded to the department a letter expressing in most cordial terms their appreciation of the services of the Army and their gratitude for the valuable assistance rendered.

Carmel Valley, Cal., fire.

Upon reports from representatives of the Pacific Improvement Co. and in response to an appeal for assistance, on July 8, 1913, troops were sent from the Presidio of Monterey to assist in the work of subduing forest fires in the Carmel Valley, Cal., which threatened the destruction of vast private interests and of the Monterey National Forest Reservation and the protective forest growth covering the headwaters of the Carmel River, the source of the water supply for the entire Monterey peninsula. By the untiring efforts of officers and enlisted men and by the most arduous labor day and night the conflagration was extinguished on July 13, within a short distance of the National Forest Reserve. The loss to private interests was comparatively small, although the fire had burned over a large area and buildings on several ranches were saved only by the timely arrival and energetic efforts of the troops.

Forest fires, Mount Tamalpais, Cal.

On July 7, 1913, in response to request for assistance, troops from the Presidio of San Francisco and from Forts Baker and Winfield Scott were sent to assist in fighting a forest fire on Mount Tamalpais, which threatened Muir Woods and seriously endangered lives and property. The troops did effective service, and the Secretary of Agriculture wrote the department expressing his appreciation of the splendid way in which the Army handled an exceedingly difficult situation.

Lower Peach Tree, Ala., cyclone.

During the spring of 1913 the Army was also called upon for duty in connection with the relief of sufferers from a cyclone at Lower Peach Tree, Ala., in which a number of people were killed and many more were injured. The Medical Department established a temporary hospital, and tents and such other supplies as were necessary were ordered for the immediate relief of the destitution and suffering that prevailed.

Forest fires, Adirondacks.

In September, 1913, the Citizens' Committee of St. Huberts, N. Y. and others requested the assistance of the Army in fighting forest fires which had been burning for three weeks in the Adirondack Mountains, and were then within 2 miles of St. Huberts. In compliance with this request a part of the Fifth Infantry was sent to the burning district and rendered valuable assistance. The conservation commission of the State of New York adopted a resolution tendering its hearty thanks to the officers and men who so materially aided in subduing the fires.

The work described above was of the greatest imaginable value, and demonstrates the preeminent usefulness of this arm of the Government in saving life and relieving distress in times of national disaster.

ARMY CAMPS FOR COLLEGE STUDENTS.

During the past summer two experimental military camps of instruction were held for students of educational institutions, one at the Gettysburg National Park, Gettysburg, Pa., and the other at the Presidio of Monterey, Cal., each camp lasting for a period of six weeks. The opportunity to participate in these camps was thrown open to all students over 17 years of age who were physically qualified and properly recommended. They were required to bear the expense of transportation to and from the camp and to pay for their subsistence and for the khaki uniform.

The instruction and military exercises were limited to the hours before noon and included the practical application of the proper precautions of health, care of the person, camping and marching, instruction in military policy and in the actual handling of troops in the field under simulated battle conditions, and in rifle shooting on the target range.

The great advantages which these camps offer to students are obvious. They obtain a healthy, active, out-of-door life for the summer vacation at a less expense than usually required when away from home and acquire habits of obedience, command, self-control, order, and personal hygiene. While the course of thorough and practical instruction involved real military work and was in no sense play, the students were afforded abundant time and opportunity for athletic sports, rest and recreation, and for gaining knowledge in the military art through which, should their country at any time stand in need of their services, they will be better fitted to discharge their duty.

The benefit of these camps to the Nation is that they foster a patriotic spirit, without which a nation soon loses its virility and falls into decay. They spread among the citizens of the country a more thorough knowledge of military history, military policy, and military needs, all necessary to the complete education of a well-

equipped citizen in order that he may himself form correct opinions on military topics.

The discipline exacted was strict and just. Students were on a cadet status; that is, treated with the courtesy due prospective officers, but subject to all the rules and regulations of the camp and disciplinary measures for infractions thereof. The camp was, in fact, a training school for manly men and good citizens, with careful but not oppressive supervision and regulations, absolutely healthful surroundings, and the best of good influences.

At the Gettysburg camp 63 universities and colleges, among them most of the leading institutions of the United States (except the Pacific coast) were represented by 160 students. Similar conditions obtained at the camp at Monterey, which was attended by about 85 students from 27 educational institutions on the Pacific coast, 90 institutions in all having sent representatives.

To those who successfully finished the prescribed course of instruction at the camp certificates to that effect have been issued by the War Department, and the names of such students are on file in the records of the department.

These camps were a great success and received the indorsement of the heads of a great many colleges and universities, of the students who attended them, and of their parents, and also of the Army officers in charge, and have so demonstrated their value as a military asset that it is contemplated to hold during the vacation period of the present year four such camps, one at Burlington, Vt., one in the mountain and spring region of Virginia or a little to the south, one in the northern part of the Middle States, and one at Monterey, Cal.

The students attending the camps during the year 1913 formed an association for which they adopted the name of "The Society of the National Reserve Corps of the United States."

The department feels that it should record its appreciation of the very hearty cooperation that is being given to its plan for student military camps by distinguished educators and other public spirited citizens interested in the training and development of youth into good citizens. Among the many who are aiding the department in this great work are the following presidents of universities and colleges, who have consented to act as an advisory committee to the student organization that has been formed: J. G. Hibben, of Princeton; A. L. Lowell, of Harvard; A. T. Hadley, of Yale; G. H. Denny, of Alabama; H. B. Hutchins, of Michigan; E. W. Nichols, of Virginia Military Institute; B. I. Wheeler, of California; J. H. Finley, of the College of the City of New York; and H. S. Drinker, of Lehigh University. I can not but think that in this new enterprise we have inaugurated a great educative work that will be of reciprocal advantage to the Government and to the splendid body of young men who are responding so en-

thusiastically. It is extremely gratifying to know that it appeals so strongly to the judgment of men of wide experience in training young men and inspiring them with ideas of useful citizenship.

ARMY RESERVE.

Provision for the establishment of an Army reserve was made in the Army appropriation act approved August 24, 1912, and became effective November 1, 1912. The object of the law is to establish a force of trained soldiers who would in case of emergency return to active service in the Regular Army. The enlistment period is changed by this law from three to seven years, the first four to be with the colors and the last three on furlough attached to the Army reserve, without pay to reservists except in the case of war, when they receive $5 a month for the time they have been in the reserve. The reserve is to consist of soldiers furloughed to the reserve for the unexpired portions of seven-year terms of enlistment, on their own application after three years' service, or compulsorily after four years' service, unless they shall elect to be discharged with a view to immediate reenlistment for another period of seven years, or to remain with their present organization until the completion of their whole enlistment, without passing into the reserve; and soldiers who enlist or reenlist in the reserve after having been honorably discharged from the Regular Army.

Regulations for the Army reserve were published in General Orders, No. 11, dated February 11, 1913; and in General Orders, No. 26, dated April 15, 1913, instructions were issued requiring that soldiers then in service who had enlisted prior to November 1, 1912, be made fully acquainted with the provisions and purposes of the law creating the reserve, and that efforts should be made to induce such of these men as were qualified and did not intend to continue in active service to enlist for the Army reserve. Instructions were also issued that with the enlistment papers there should be forwarded to The Adjutant General's Office the applications of such recruits as desired transfer to the reserve at the end of three years' service with an organization.

The Adjutant General reports that approximately 21,000 men enlisted in the Army between November 1, 1912, and August 31, 1913, and of this number 61 made application to be furloughed to the reserve at the expiration of three years' service, and that on the date last named the reserve consisted of 8 men.

I found from a personal trip to most of the Army posts and from interviewing as many of the officers and men as I could that the men were dissatisfied with the present enlistment contract. It does not seem worth while to discuss whether their dissatisfaction is well founded or not since it exists, and if we are to build up a reserve we

must devise some method of doing so. That we must build up a reserve seems to be the consensus of opinion, and I understand that Congress is favorable to a reserve. One trouble with the present law undoubtedly is that it does not offer as great financial inducement to the man who enlists so as to pass into the reserve as it does to the one who does not so enlist, particularly during the first six years of his service.

From the most careful consideration that I have been able to give this subject I have reached the conclusion that we will be able to get a reserve, if one is obtainable at all, by a provision of law that will permit the department when it is satisfied as to the proficiency of the soldier to honorably discharge him with no other obligation on his part, as far as the balance of his enlistment is concerned, except to return to the colors in case of actual war. The brevity of my allusion to this subject in this report is not because of its slight importance, the fact being that I think it of the very greatest importance, but because the details will have to be worked out after the most careful consideration by the Congress, with such aid from the department as may be called for. I have, therefore, thought it useless to take more time and space here to deal with it.

UNITED STATES MILITARY ACADEMY.

On September 1, 1912, there were 556 cadets on the rolls of the Military Academy and 74 vacancies. Due to the increase in the number of Members of the House of Representatives following the taking of the last census, the authorized strength of the corps of cadets was increased by 42. On September 1, 1913, the authorized strength of the Corps of Cadets, including those authorized under the act of April 19, 1910, permitting a cadet's successor to be admitted after the former shall have finished three years of his course, was 691. The actual strength on that date was 611, leaving 80 vacancies.

There is every reason why this splendid educational institution should be operated and maintained at its maximum capacity. The Government has made large expenditures and has buildings and accessories to meet every purpose. The excellent corps of professors and instructors, the magnificent location of the academy, and the traditions and fine atmosphere that surround West Point, all demand that its splendid facilities should be utilized to their fullest extent. In my judgment, a graduate of the academy, whether he continues in the Army or after the statutory period of service returns to civil life, becomes a national asset of increased and peculiar value because of the training he has received. We owe it to the country and to the hundreds of eager boys everywhere throughout the length and breadth of the land who are seeking, but can not get, appointments

to the academy, to devise some plan that will keep these places always filled. There should be a waiting list, instead of a list of vacancies.

For the last 10 years the average annual number of vacancies at the academy has been 80. This matter has been repeatedly brought to the attention of Congress, but so far without any effective legislation. Why should not the doors of this national institution be thrown open to the widest competition in every State, so that any boy who is morally and physically qualified may take the mental examination with the condition that if no candidate from the particular congressional district in which a vacancy exists should qualify, the candidate who passed highest from some other district where there was no vacancy should receive the appointment? However, the department is not wedded to this or any other particular plan, and will welcome any method that the Congress in its wisdom may devise that will keep the quota at West Point filled to the limit with young men who are sound morally, physically, and mentally. With the wealth of material that exists it ought not to be a hopeless task to work out the problem presented.

There has been some complaint that the mental examinations for admission to West Point are unnecessarily severe, and that it is difficult, if not impossible, for a boy to qualify unless he has the means to attend a course at one of the numerous preparatory schools that make a specialty of fitting for the Military and Naval Academies. While not disposed to lower the high standards which now exist, experience has shown that there are frequent cases where the cramming process which is undergone at these preparatory schools enables a boy to pass the examination without really being sufficiently well grounded to maintain himself after admission to the academy. It is believed that a better test of a boy's capacity for the work he will be called upon to do is to be found in the educational preparation required for entrance into our collegiate institutions of the first rank. Accordingly a rule has been adopted to accept the certificate of these institutions in lieu of a mental examination. This does not interfere with the boy who has not this certificate. It simply amplifies the means of entrance.

ELIMINATION AND SELECTION.

In any concern where the managers are appointed for life and their advancement to higher positions is a mere question of time, necessarily individual initiative is absent as an incentive. This is the situation which any student of the Army finds present there. While there is a surprising amount of ambition and initiative in the Army, the fact that each man is promoted up to the grade of colonel purely

by reason of causes entirely outside of his own conduct and merely by the passage of time, makes the initiative absolutely self-generated. In the earlier stages officers have the initiative natural to youth. As they grow older the deadening effect of the system becomes progressive, and in many cases the loss of initiative is apparent.

To my mind it is perfectly clear that if some plan of selection, perhaps to a limited extent, is put into effect, the added impulse will be enormous, and all of the officers of the Army will feel the result, and the effect with respect to alertness, enterprise, and vigor will be very great.

This subject is receiving a very great deal of attention, and I think it is ripe for the Congress to take up, and I hope to be able to cooperate with them in this matter.

DETAIL SYSTEM.

So far as I have been able to observe, the detail system put into effect in 1901 has worked most satisfactorily. It has been indorsed by every Secretary of War since that time. Under that system, instead of having a permanent Staff Corps, officers from the line of the Army are from time to time detailed with the result that the Staff Corps officers are so recently from the line as to know the sentiment and needs of the line, and when they go back into the line they are so recently from the staff as to be able to use the knowledge acquired therein advantageously in the line.

In my judgment we should proceed along the lines as originally laid down until this system has been fully put in operation and the law providing for it has been complied with.

MILITARY AERONAUTICS.

In February, 1913, the aviation school at Augusta, Ga., was transferred to Texas City, Tex., where the second division of the mobile army was concentrated, in order to take part in field operations and thus enable officers and troops and aviators to study and perfect the use of the aeroplane under actual field conditions. Two of the longest cross-country flights without stop ever made in this country were completed, from Texas City to San Antonio and return, a distance of 240 miles each way. On this flight a remarkable military sketch map was made by the reconnaissance officer, fairly complete in detail and showing railroads, wagon roads, towns, streams, hills, woods, prairies, and other topographic features of value in military reconnaissance work.

The equipment of the army aviation service now consists of 15 aeroplanes. Contracts have been made for six additional aeroplanes, and their delivery is expected in a short time. The Army has no dirigibles of any kind.

The interest which is being taken by various countries in the development of military aeronautics is reflected in the appropriations made for that purpose, which for 1913 are as follows:

France	$7,400,000
Germany	5,000,000
Russia	5,000,000
England	3,000,000
Italy	2,100,000
Japan (approximate)	1,000,000
Mexico	400,000
United States	125,000

The total amount expended by the United States since the inception of the art is $255,000.

It has seemed wise to me this year, in view of other more urgent necessities, not to ask for any large appropriation for this service. Undoubtedly the experiments being carried on in other countries at great expense will demonstrate the most useful form of air machine, and when we are in a situation to expend money for this purpose we will also be in possession of information which will enable us to expend it with the best results.

SEACOAST FORTIFICATIONS.

The installation of heavy gun batteries for the home ports of the United States is now practically completed, with the exception of the entrance to Chesapeake Bay and at San Pedro, Cal., the port of Los Angeles, which has recently been added to the list of ports to be defended.

Fortification is progressing satisfactorily at the entrance to Manila Bay and at El Fraile and Caballo Islands.

In the Canal Zone battery construction has proceeded rapidly, and the armament will be shipped and installed as rapidly as possible.

The seacoast defenses of Oahu are now nearly finished.

The construction of barracks and quarters for officers and men in the Canal Zone and Oahu is a matter necessitating early action, in order that the troops may be sheltered. Accordingly estimates have been submitted for an appropriation to build these barracks and quarters, aggregating $1,753,600 for the Hawaiian Islands and $1,268,580 for the Canal Zone. The full plan and details are contained in a letter to the Speaker of the House, published in House Document No. 276, Sixty-third Congress, first session.

ARMY POSTS.

There are so many matters of immediate importance calling for consideration, particularly an adequate supply of field artillery and ammunition therefor, that I do not purpose making any suggestion

to Congress at this session concerning the matter of new construction of Army posts. Whatever plan may hereafter be formulated with respect to the number and location of posts as a result of the study of the economical management of the Army, I think it much wiser at the present time to get along with what we now have than to ask for the necessary appropriations to build larger posts for the purpose of housing larger units of the service. With the accommodations and resources now available, I shall endeavor to so station the Army as to have not less than a regiment at a post, or so that the different units of a regiment are so close together as to make them for all practical purposes as utilizable as if stationed at one post.

GEOGRAPHICAL DIVISIONS AND DEPARTMENTS.

By general orders dated February 6, 1913, a tactical organization of the troops of the mobile Army into divisions and brigades was established, and for purposes of military administration the territory of the United States and its possessions was reorganized into six geographical commands—the Philippine Department, the Hawaiian Department, and four departments in the United States, known as the Eastern, Central, Western, and Southern Departments.

CONSOLIDATION OF SUPPLY DEPARTMENTS.

The consolidation of the former bureaus of the War Department known as the offices of the Quartermaster General, Commissary General, and Paymaster General into a single bureau known as the Quartermaster Corps, and the consolidation of the Quartermaster's, Subsistence, and Pay Departments of the Army into a single department known as the Quartermaster Corps of the Army became effective November 1, 1912, and replaced the three bureaus of the War Department and the three departments of the Army above mentioned. Since that date the duties previously performed by the three separate departments have been performed by the Quartermaster Corps, except in the Philippine Islands, where the consolidation did not become effective until January 1, 1913.

The consolidation was effected promptly and satisfactorily, and so far as known without delaying or interfering with the supply service and pay of the Army, notwithstanding the fact that approximately one-half of the 130 captains of the line detailed for duty with the Quartermaster Corps were relieved from such detail by the operation of the law requiring two years' duty with troops in each preceding six years.

An actual saving of $47,030 per annum for clerical hire in the office of the Chief, Quartermaster Corps, has followed the consolidation of the office establishments of the Quartermaster General, Commissary General, and Paymaster General.

Gen. Bell, commanding the Department of the Philippines, reports that the consolidated work of the three departments—Quartermaster's, Subsistence, and Pay—is now being done by the office force of the department quartermaster at a cost $3,650 less than the cost of operation of the single office of the department quartermaster before the consolidation.

SCIENTIFIC SHOP MANAGEMENT.

In the Ordnance Department, which is the great manufacturing branch of the Army, scientific shop management has been continued at the various arsenals with a considerable saving to the Government and with advantage to the workmen in increased pay.

At the Watertown Arsenal, where the system was first installed and where its practical operations have been further advanced than at any other arsenal in the application of the time study and premium features, the Chief of Ordnance reports the sums paid out in premiums to men engaged upon premium jobs amounted in the month of August, 1913, to an average addition of between $9 and $10 to their monthly wage. The total amount paid out in premiums during the 17 months from January 1, 1912, to May 31, 1913, at the Watertown Arsenal, was something over $22,000. This was over and above the regular wages, which were the same as those in the vicinity, no reduction having been made.

Systematic attention has also been given to the utilization of accumulations of scrap and of obsolete materials, and a satisfactory saving has resulted.

The act of Congress approved July 17, 1912, authorizing the payment of cash rewards for valuable suggestions submitted by employees has been put into operation during the year with a stimulating effect.

Continued attention has been paid to the reduction of the number of preventable accidents to employees by the installation of adequate safety devices, and to providing for the comfort and welfare of the workmen at the various arsenals.

The law enacted May 30, 1908, providing for the compensation of employees, requires absence as a result of injury of at least 15 days before compensation can be paid, after which full wage is paid for the period of disability up to one year. It is believed that this law might be improved by changing it so that payment for time lost through injury shall commence concurrently with the loss of time, and shall be less than the full wage so that there may be an incentive to return to work.

TRANSFER OF WASHINGTON-ALASKA MILITARY CABLE AND TELEGRAPH SYSTEM TO POST OFFICE DEPARTMENT.

The Washington-Alaska military cable and telegraph system begun in 1900 was constructed by the Signal Corps of the Army as a military necessity to connect the scattered posts in Alaska and to afford a direct line of telegraphic communication with Seattle for the transmission of military orders and instructions. From the first the facilities of the system were thrown open to the public, and undoubtedly this service has been of great value to the people of the Territory and has helped materially to develop its resources. With the settlement and growth in population of Alaska the use of this system for commercial business is now so preponderating as to make it a public utility rather than a military necessity, and as a consequence the War Department has requested the Post Office Department to take over the system. The matter will be laid before Congress at this session with a view to securing its consent to the proposed transfer. When this is effected 200 enlisted men and 5 officers will become available for field duty with the Signal Corps.

The system now embraces 2,635.95 miles of submarine cable, 1,047.5 miles of land lines, and 10 radio stations. The proposed transfer contemplates turning over to the Post Office Department the entire system—cables, land lines, radio stations and equipment complete, as it now stands—and relieving the Signal Corps of the Army from any further duty or responsibility for its operation and maintenance.

THE ORGANIZED MILITIA.

While there has been a small decrease in officers and enlisted men in the Organized Militia during the past year, this decrease has occurred, in great part, as the result of the elimination of organizations found hopelessly inefficient and is compensated for by an increase in general efficiency.

The introduction in a number of States of a systematic and progressive course of theoretical instruction, formulated and supervised by Regular Army officers, produced good results. In practical instruction progress has been made at the officers' camps held in many States, the results obtained confirming the opinion already held, that these camps are a valuable means of supplementing the theoretical instruction previously imparted.

It is regretted that in target practice the reports show but slight progress during the year. This fact is the more serious as rifle practice is recognized as one of the most vital elements in the training of the infantry soldier. The present tendency to develop rifle teams, composed mostly of commissioned officers, at the expense of target

practice for the enlisted man is opposed to the Federal policy in this matter and should be discontinued.

The excessive cost of attendance at garrison schools, together with the inadequate results obtained, necessitated the withdrawal of authority for attendance thereat. Better results will be obtained at other service schools whose doors are open to the Organized Militia, and the appropriation which formerly was devoted almost exclusively to the former class of schools should be utilized in an increased attendance at the latter.

Measures calculated to protect the interests of the Government in Federal property issued to the Organized Militia have been introduced during the year. These measures take the form of a system of accountability that enables the States concerned to regulate the quantity of such supplies kept on hand by the demands of the organizations requiring it and which enables the Federal Government to know at all times the amount of its supplies actually in the hands of the States, and at the same time secures it against waste by improper application of the law authorizing the dropping of clothing under the provision regulating the clothing allowance.

The great expense of mounts for field artillery and cavalry interposes a serious obstacle to the provision of an adequate and efficient force in either of these arms. The only remedy lies in an increased Federal appropriation looking to the partial maintenance of a nucleus of mounts for such organizations, such mounts to be originally purchased, however, by the militia. Legislation to this effect has been proposed.

The necessity for a greater number of inspector-instructors for the Organized Militia has become so pressing that it is believed that legislation should be secured providing for an increase of officers of the Regular Army sufficient to fulfill the demands of the States for these officers. The law contemplates the detail of an inspector-instructor for each regiment or separate battalion of infantry, and the equivalent for the other branches of the service, and it is the policy of the War Department to carry this law into execution so far as practicable. At present this is impossible, as such action will require a total of 187 officers, an excess of 109 over the present number on detail.

Reluctance on the part of many States to provide sanitary organizations in their Organized Militia is regretted. Properly organized sanitary units are so important in field service and so difficult to provide within the limited time available after the need for their existence arrives that every effort should be made to provide, equip, and train these organizations in time of peace.

The national importance of a reserve system for the Organized Militia can not be questioned. The minimum strength at which

militia organizations are maintained in time of peace will render necessary a great and immediate increase in a national emergency, and this fact demands the presence of a system of reserves from which trained men may be secured for this increase. Without some such system, not only will such increase be rendered exceedingly difficult, but even when accomplished the efficiency of the organizations will have been reduced to a minimum by the introduction of an untrained element double in number the trained personnel.

The cooperation of the governors of the several States having been secured, a plan for the organization of the entire Organized Militia into military divisions has been initiated. It remains now for the Organized Militia to complete their organizations, both in number and in strength, so as to render these divisions such in fact as well as in name.

The War Department has issued, during the year, instructions calling for compliance with the militia law in the matter of organization. Proper organization as required by the law is absolutely necessary if the Organized Militia is to be counted on as a dependable military Federal asset in time of national need, and the organizations existing as such in name only will be required to complete their component elements or lose Federal recognition of their character as such organizations.

THE PHILIPPINES.

Personnel.

Gov. Gen. Forbes, who had left the islands on March 15, 1912, because of ill health, reached the Philippines on his return January 8, 1913. During the absence of the Governor General the duties of that office had been performed by Vice Gov. Newton W. Gilbert.

The resignation of Gov. Forbes was accepted in the following letter:

THE WHITE HOUSE,
Washington, August 25, 1913.

MY DEAR GOV. FORBES:

I have appreciated your willingness to remain as Governor General of the Philippines until I might, with deliberation, select your successor. I realize the amount of excellent work which you have done in the islands both as secretary of commerce and police and as Governor General, and I desire to thank you for your faithful and careful service.

It is my desire that your successor should, if possible, reach the Philippine Islands before October 16, and I therefore accept your resignation to take effect September 1.

Sincerely, yours,

WOODROW WILSON.

HON. W. CAMERON FORBES,
Governor General of the Philippine Islands, Manila, P. I.

Mr. Francis Burton Harrison, of New York, was appointed Governor General, his appointment dating from September 2, 1913, on which

date he took the oath of office in the War Department. Gov. Harrison sailed for the islands on September 10.

Vice Gov. Newton W. Gilbert, secretary of public instruction, submitted his resignation in a letter dated April 18, 1913. His resignation was not at that time accepted. Shortly after the arrival of Gov. Gen. Harrison, Vice Gov. Gilbert, who had been acting governor, again submitted his resignation, and it was accepted, to take effect on the qualification of his successor. Vice Gov. Gilbert, who had been entitled to a leave of absence for some time, but had not taken it, due to the requirements of the service, availed himself of a leave of absence, and left the islands October 16.

Judge Charles B. Elliott, of Minnesota, who had been a member of the Philippine Commission and secretary of commerce and police, while on a leave of absence in the United States resigned, to take effect December 4, 1912.

Mr. Dean C. Worcester, who had been a member of the Philippine Commission from its formation and secretary of the interior of the Philippine Islands from the date of the establishment of that office, resigned, and his resignation was accepted to take effect September 15, 1913.

Mr. Gregorio Araneta, who had been a member of the Philippine Commission and secretary of finance and justice, Messrs. Jose R. de Luzuriaga, Juan Sumulong, and Frank A. Branagan, members of the commission without portfolios, submitted their resignations, which were accepted, to take effect on the qualification of their successors. Nominations of persons have now been sent in to fill all the vacancies on the commission and, as organized on the confirmation of the pending nominations, it will be composed as follows:

Governor General and president of commission, Francis Burton Harrison.

Vice Governor and secretary of public instruction and member of commission, Henderson S. Martin.

Secretary of the interior and member of the commission, Winfred T. Denison.

Secretary of commerce and police and member of commission, Clinton L. Riggs.

Members of the commission without portfolio, Jaime C. de Veyra, Rafael Palma, Vicente Ilustre, Vicente Singsong.

The year in the Philippine Islands has been one of orderly progress.

Public order.

There was during the year no incident which disturbed the peace of the Christian provinces of the Archipelago.

There was a slight disturbance in the Moro Province, apparently due to the execution of the orders of the provincial governor of September 8, 1911, directing the disarmament of the Moros and extending

to the Moro Province the rules governing the islands in general as to carrying arms. This disturbance is now, it is hoped, happily ended, and on July 8, 1913, this cablegram was sent to the Governor General of the islands expressing the wishes of the department in this matter:

I am glad to learn from dispatches that the forcible disarmament of the Moros is practically completed, and I trust that from now on the question of carrying arms may be controlled by measures similar to those in force in the northern islands.

Finances.

Though the revenues of the Government have progressively increased, the funds from this source alone have been unable to keep pace with the rapid construction of public works which have been carried on in the islands. This has been recognized by my predecessors, who have recommended to Congress the granting of authority to increase the limit of indebtedness of the Philippine Government for public works from $5,000,000, as now authorized by law, to $15,000,000. The plan of public works which has been pursued in the Philippine Islands has contemplated this grant of authority and the receipt of funds as a consequence thereof. Very largely as a result of this, the available cash balance for general purposes in the Philippine treasury was at the end of the fiscal year 1913 somewhat lower than it has been in any year since 1905, this notwithstanding the fact that during the past few years there had been expended for public works the proceeds of a $5,000,000 loan and that a considerable surplus of the gold-standard fund had been made available for general purposes by an act of the Philippine Legislature.

The new Governor General is confronted with the necessity of adopting one of these courses: Either of continuing the recommendation of his predecessor for authority to issue bonds, or materially curtailing the expenses of the government, or increasing taxation. The urgency of one of these steps is the greater because of the fact, as will appear in the discussion of the effect of the new tariff, that the Philippine Government is deprived of a source of revenue averaging approximately $1,000,000 a year by the abolition under that act of export taxes in the Philippine Islands.

The foreign trade of the Philippines for the past fiscal year reached a total of $110,000,000, being an increase of a little over $5,000,000 from the total of the preceding year. Of the imports amounting to $56,000,000, 45.1 per cent were from the United States as compared with 37.8 per cent of the totals for the preceding year. Of the total exports of $53,307,251, 37.1 per cent were shipped to the United States as compared to 42.8 per cent in the preceding year. The loss was due entirely to sugar, 87 per cent of which was shipped to the United States in 1912, and 42 per cent only in the fiscal year 1913. Reports from the islands indicate that there will be large production of all of the principal crops in the current fiscal year.

Tariff changes.

In the tariff act which was approved October 3, 1913, the provisions of the act of August 5, 1909, governing trade relations between the United States and the Philippines were amended in the following respects:

First. The provision limiting the number of cigars and other forms of tobacco which might enter the United States from the Philippine Islands free of duty was stricken out.

Second. The provision limiting the amount of sugar which might be admitted free of duty from the Philippine Islands was stricken out.

Third. The provision requiring rice shipped to the Philippine Islands from the United States, or to the United States from the Philippine Islands to pay the same duty imposed upon rice shipped from foreign countries into the Philippine Islands or the United States, respectively, was stricken out.

Fourth. Section 13 of "An act to raise revenue for the Philippine Islands and for other purposes," approved August 5, 1909, was repealed. This was the section imposing export tax, so that all export taxes in the Philippine Islands were abolished. All of these modifications are intended to give more liberal treatment to the products of the Philippine Islands.

Under the law of 1909, the export tax on hemp amounted to about $1,500,000 annually. It is fair to assume that this tax ultimately fell upon the producer. So much of this as represented exports shipped directly to the United States for consumption therein was remitted, in consequence of which the insular treasury received but $1,000,000 of the tax, the remaining $500,000 representing a differential in favor of American importers. The abolition of this tax, therefore, though depriving the treasury of considerable annual revenue and American hemp importers of the substantial advantage they formerly enjoyed, should, nevertheless, remove a considerable burden from the hemp producer. Briefly, the effect of this should be to relieve the Philippine producer of a tax of about $1,500,000 a year by decreasing the revenues of that government approximately $1,000,000.

Relations of houses of legislature.

The regular session of the legislature adjourned February 3, 1913, for the third successive year without having passed the annual appropriation bill for the support of the Government. The legislature was called into extra session by the Governor General, convening on February 6, 1913, and adjourning on February 12, but did not during the extra session pass the appropriation bill.

Section 7 of the organic act of July 1, 1902, provides, among other things—

That if at the termination of any session the appropriations necessary for the support of the Government shall not have been made, an amount equal to the sums

appropriated in the last appropriation bills for such purposes shall be deemed to be appropriated; and until the legislature shall act in such behalf the treasurer may, with the advice of the Governor, make the payments necessary for the purposes aforesaid.

For the third successive year it became necessary to take action under this provision, so that the executive authority performed what is ordinarily the most important duty of the legislature; that is, to provide annual appropriation bills.

This continuous disagreement between the two houses on the most important matters committed to the legislature is not indicative of a healthful condition. The remedy can only be arrived at after detailed and accurate knowledge of the causes is ascertained.

Slavery agitation.

The Senate on May 1, 1913, passed the following resolution:

Resolved, That the Secretary of War be, and he is hereby, directed to send to the Senate any and all facts bearing directly or indirectly upon the truth of the charge publicly made that human slavery exists at this time in the Philippine Islands and that human beings are bought and sold in such islands as chattels.

In the debate preceding the passage of this resolution there was read part of a letter from Mr. Dean C. Worcester, the secretary of the interior of the Philippine Islands, which constituted, in part at least, the basis for the resolution.

There had been other public references to this and an official reference in the annual report of Mr. Worcester as secretary of the interior for 1912.

It was found that there were in the War Department records of allegations, but no facts which bore on the truth of the allegations, nor was it found that there was any authoritative opinion or court decision which went to the adequacy of existing law in the Philippine Islands to meet conditions which were alleged to exist, and reply to this effect was made to the Senate.

Later Mr. Worcester submitted a printed report designed to justify the position which he had previously taken on this matter, and in which he alleged in considerable detail the existence of slavery, peonage, and the barter of human beings in the Philippine Islands, reciting that such conditions had existed for a number of years and that his efforts to bring about correction had not met the support which he felt they were entitled to.

It is needless at this time to go into this matter. Gov. Gen. Harrison has arrived in the Philippine Islands, and it is in order to determine if the laws of the islands are adequate to meet the conditions alleged to exist. If not, the laws should be amended. Even the absence of the conditions alleged would hardly justify the failure to enact provisions making such conditions impossible. If it is found that the existing law is adequate, then it should be adequately enforced.

Since writing the foregoing the department has been advised that a law on this subject has passed both houses of the Philippine Legislature, with slight differences, which are now pending adjustment.

In his first address to the Filipino people on his arrival in the islands, you authorized Gov. Gen. Harrison to say, as coming from you:

> We regard ourselves as trustees, acting, not for the advantage of the United States, but for the benefit of the people of the Philippine Islands. Every step we take will be taken with a view to the ultimate independence of the islands and as a preparation for their independence; and we hope to move toward that end as rapidly as the safety and the permanent interests of the islands will permit. After each step taken experience will guide us to the next. The administration will take one step at once. It will give to the native citizens of the islands a majority in the appointive commission, and thus in the upper as well as in the lower house of the legislature. It will do this in the confident hope and expectation that immediate proof will thereby be given in the action of the commission under the new arrangement of the political capacity of those native citizens who have already come forward to represent and lead their people in affairs.

There is evidence that this pronouncement has been well received both in the United States and in the islands. The step in advance announced therein, which has now been taken, will be carefully observed. Those best acquainted with conditions in the islands anticipate no evil consequences therefrom.

My predecessors have recommended the passage of a bill authorizing an increase of the limit of the bonded indebtdeness for public works by the Philippine Government to $15,000,000. For the reasons given above under the heading of "Finances," it is possible that I shall be forced to repeat this recommendation. However, I shall not do this unless it shall appear on further study to be absolutely necessary.

Recommendations.

In the past few years, with the best of motives and with a judgment which may be justified by the event, the Government has undertaken an elaborate plan of public improvements, embracing harbor works, road construction, building of schools, and other public works. The cessation or lessening of these works will require a readjustment, with a reduction of the number of employees in the bureau of public works. Such a curtailment is never acquiesced in without criticism coming from those who differ with the policy as well as from those directly interested in the projected improvements abandoned, and by those whose employment in the public service is discontinued.

The fact, however, had to be faced that the finances of the Government admitted of no choice in the matter. The improvements of the past several years required large expenditures.

A bonded debt of $5,000,000 was contracted, and a great deal of the current revenues were expended for this purpose. There have been and are now under construction in the Philippine Islands rail-

roads which impose on the Government a contingent liability which will in part be met for a number of years from the revenues of that Government. The fixed charges against the Government to meet these obligations are considerable. In addition to that, with the construction of public works, particularly in the nature of roads in a tropical country, there is imposed the obligation of maintenance, which is in its nature an additional fixed charge.

It may be that the Government has, for the present and until its revenues are materially increased from existing sources, developed sufficiently in the direction of public works, however useful. If such is the case, it would be unwise at this time to enter into additional indebtedness.

PORTO RICO.

Personnel.

Gov. George R. Colton, who had been governor of Porto Rico since 1909, resigned on November 5, 1913, and was succeeded by Mr. Arthur Yager, of Kentucky.

While awaiting the arrival of Gov. Yager, the duties of that office were performed by Mr. M. Drew Carrel, the secretary of Porto Rico.

Gov. Yager arrived in San Juan on November 19, and was inaugurated on November 20.

Economic conditions.

Measured by its trade and production, the year has been one of exceptional prosperity in Porto Rico. There were shipped from the island 383,000 tons of sugar, an increase of 16,000 tons over the corresponding amount of the preceding year and an increase from about 55,000 tons per year in the last years preceding American occupation of Porto Rico. Almost 50,000,000 pounds of coffee were shipped out, invoiced at $8,511,316. Both in quantity and price this was the most favorable year for Porto Rican coffee since 1896. Furthermore, the exports of tobacco and its manufactures were in excess of any previous year while the exports of fruits were 30 per cent greater than i any previous year.

The unfavorable feature of the external trade was the lower price received for sugar, which resulted in a reduction of the total shipped by $5,000,000 in price with an increase of 16,000 tons in quantity.

Notwithstanding this, sugar represented slightly more than 50 per cent of the exports from the island. This great development of the sugar industry in Porto Rico has, with the advantages to the island, been accompanied by two unfortunate conditions—the first is the cultivation of lands in sugar cane which under normal conditions would have been continued in pasture or other crops, and the second was the rather wild speculation in certain sugar properties.

With the reduction of the high protection heretofore given sugar, which had resulted in this overextension and overspeculation, there would necessarily be a readjustment, the immediate effect of which

would be a depression in the sugar industry and in those industries dependent thereon. The effect of this in Porto Rico would be great where the sugar industry has become the dominant industry of the island. The speculation, however, had of its own force and independently of the modification in the tariff brought about a depression in the industry which preceded the revision of the tariff and brought with it the necessity of a more conservative development. This should have the result of weakening any ill effects which may follow to Porto Rico due to the modification of the tariff on sugar. The readjustment due to these causes will impose a heavy obligation on the Government and leading agriculturists of Porto Rico.

The total exports and shipments from the island amounted to $49,000,000. The total imports and shipments into the island amounted to $37,000,000. Eighty-six per cent of the external commerce of the island was with the United States, which included purchases in the markets of the United States amounting to over $33,000,000. Practically all of the exports from Porto Rico, except coffee, are sold in the United States and all have been articles admitted free into a highly protected market. This is true of sugar, tobacco, and fruits. In addition to this, one-half of the Porto Rican coffee crop is sold in Cuba where, under the trade convention between the United States and Cuba, the Porto Rican coffee is given a differential of approximately 2 cents per pound.

Finances of the government.

The total revenue receipts of the island for the year were $6,507,480.41, a slight decrease from the preceding year.

The legislative assembly enacted laws revising the excise and license taxes. The local estimate is that these laws will increase the income from these sources by $1,700,000 per annum.

The insular revenues continue barely sufficient to support the government and would be entirely inadequate if they did not include the local internal-revenue and custom receipts.

The legislative assembly concurrently with increasing the revenues made more liberal provisions for education and sanitation. The excellent work accomplished and being undertaken by both of these services is set forth in the report of the governor of Porto Rico submitted herewith.

Political situation.

Notwithstanding the wonderful development of Porto Rico in the past 10 years, a development due almost entirely to the stimulus to the industries of the island given by free access to the American market and the accompanying advantages in the market of Cuba due to our trade convention with that island, Porto Rico has been by no means free from political agitation.

It would seem from the records that this agitation had been largely the result of the failure to confer American citizenship in some form

on the people of the island, now known as "citizens of Porto Rico." I have been informed that in 1906 and in 1910 there was apparently a unanimous request for this citizenship. However, in 1913, in the closing days of the Sixty-second Congress, the lower house of the Porto Rican Legislative Assembly, through its speaker, for reasons not made clear to this department, urged that the bill then pending in the Senate, which had passed the House, providing for the granting of American citizenship to citizens of Porto Rico, be not at that time passed.

The political situation in Porto Rico has been further complicated by the development in the last few years of a demand for independence of the island under some form of protection or tutelage of the United States. This demand represents the idea of but a few people. I believe that it is idle to consider or to discuss any future for the people of Porto Rico as separated from the United States.

Weighing such evidence as has come before me, I am of the opinion that practically all the people of Porto Rico desire American citizenship. I believe that to avoid possible legal complications this citizenship should be granted on the individual application of the Porto Rican citizen under conditions which make this application as simple as possible without expense to the applicant. I am of the opinion that the Porto Ricans should be given, as opportunity presents itself, a greater participation in the central government of the island. I believe that this participation will not result in a backward step in the civil progress of the island.

THE PANAMA CANAL.

The satisfactory progress of the work on the Panama Canal during the fiscal year is shown in detail in the annual report of the Isthmian Canal Commission, which is ready for transmission to Congress as a separate document and which will be submitted to you for that purpose.

The organization of the various units of the commission continued as shown in previous annual reports, except for minor changes, until January 1, 1913. The division engineer of the Pacific division resigned, effective December 12, 1912, which necessitated a reorganization of the work on the Pacific side, which was divided between the second division and the newly created fifth and sixth divisions of the chief engineer's office, as shown in detail in Col. Goethals's report. His report also details a few other changes, including the transfer, on May 1, 1913, of the dredging work in the Atlantic division to the sixth division, thus consolidating it with the dredging organization of the Pacific side.

The main features of the work during the year, with some of the latest available data, are as follows:

Excavation.

During the year 30,113,724 cubic yards were excavated, as compared with 30,302,261 cubic yards in the preceding year. There were excavated by steam shovels 17,035,351 cubic yards, as against 19,343,134 cubic yards in the previous fiscal year; 13,078,373 cubic yards were excavated by dredges, against 10,959,127 cubic yards in the fiscal year 1912. The total yearly excavation in the past six fiscal years through which the work has been in full swing is shown in the following table:

	Total.	Monthly average.
	Cubic yds.	*Cubic yds.*
1908	27,979,375	2,331,615
1909	37,966,926	3,183,910
1910	31,858,122	2,654,843
1911	32,203,931	2,683,661
1912	30,302,261	2,525,188
1913	30,113,724	2,509,477

On July 1, 1913, there remained 28,969,461 cubic yards of material to be excavated to complete the canal. This includes the addition during the fiscal year of 20,126,000 cubic yards to the estimate of July 1, 1912, of the entire amount of excavation for the canal, which now reaches a total of 232,353,000 cubic yards of excavation since the time the United States took over the work. The increase in volume of excavation over the estimate of July 1, 1912, is due to the following causes:

ATLANTIC GEOGRAPHICAL DIVISION.

	Cubic yards.
Dredging at coaling station and approach	3,050,000
Removing shoals in bay	370,000
Dredging canal channel, maintenance, etc	1,809,000
	5,229,000

GATUN LOCKS, DAMS, AND POWER HOUSES.

Steam-shovel excavation for foundations power and control houses	195,000
Dredging at north approach wall, Gatun Locks	220,000
	415,000

CENTRAL DIVISION.

Sluicing back of Gold Hill to lessen weight of bank	2,057,000
Excavation of diversions and accessories	156,000
Excavation canal prism and slides	9,067,000
	11,280,000

PACIFIC GEOGRAPHICAL DIVISION.

	Cubic yards.
Wet excavation, including maintenance	3,065,000
Dry excavation, Miraflores Locks, Dams, and power houses	5,000
	3,070,000
Less decrease in estimate for dry excavation in canal channel and accessories and at Pedro Miguel Locks and Dams	377,000
	2,693,000

PACIFIC TERMINALS AND SHOPS.

Dry excavation	229,000
Wet excavation	280,000
	509,000
Grand total net increase	20,126,000

The following table shows a comparison of the total excavation by divisions between the estimate of December, 1908, and the revised estimates made at different dates since that time:

	December, 1908.	July, 1910.	September, 1911.	July, 1912.	July, 1913.
Atlantic division	43,077,310	43,357,345	47,227,822	47,522,822	53,167,000
Central division	89,794,493	97,125,018	101,801,296	106,416,296	117,697,000
Pacific division	41,794,791	42,055,403	46,294,261	58,287,261	61,489,000
Total	174,666,594	182,537,403	195,323,379	212,226,379	232,353,000

The following table shows the status of excavation work on October 1, 1913:

	Cubic yards.	
Estimated French excavation usable in present plan		29,908,000
Estimated amount of excavation required on May 4, 1904		232,353,000
Total amount required to complete canal under present plan		262,261,000
Amount taken out by French prior to May 4, 1904	29,908,000	
Amount taken out by Americans to Oct. 1, 1913	211,048,198	
		240,956,198
Amount remaining to be excavated Oct. 1, 1913		21,304,802

Culebra Cut—Slides.

The following extracts from Col. Goethals's report indicate the condition of the largest slides in the Culebra Cut at the close of the fiscal year:

The total amount of material due to slides so far removed aggregates 22,570,200 cubic yards, or an increase of 2,304,200 cubic yards over that estimated in the last annual report. Slides and breaks increased as the cut was deepened. No treatment has proven effective for slides when once developed except that of excavating and hauling away material from the moving mass until the slide comes to rest or until the angle of repose for the particular material in motion is reached.

The predictions of the geologist in the last annual report, with reference to the Cucaracha slide, that "the end of the activity of this slide is now well in sight, however, because all loose surface stone and clay has almost slid off, exposing several large dikes and flows of basalt which would successfully maintain in place most of the remaining material," have not been realized. The bottom grade of the canal had been reached and the widening cuts had progressed satisfactorily until within approximately 60 feet of the line of the prism was reached on the east side, when on January 20 the basalt rocks broke and there slid into the cut approximately 2,000,000 cubic yards of material, extending completely across the cut, topping the tracks on the 67-foot level, and completely stopping the passage of trains from the north. Bottom grade was subsequently reached for sufficient width to put in drainage pipes for handling the water from the north, but the rains saturating the loosened material occasioned a flattening of the slope, thus causing another movement, and the weight of the superimposed mass broke the pipes. Work was continued on the slide during the year, but principally for the purpose of maintaining the tracks on the 67-foot level open for the passage of trains. This slide at the close of the fiscal year covered an area of approximately 50 acres. The total amount removed thus far since July, 1905, when it began moving, is 3,859,500 cubic yards, leaving approximately 1,500,000 cubic yards still to be removed. The material on the south side of the slide is practically all clay; the middle of it consists of clay and spalls and the north side of it rock with a mixture of clay. The clay and the clay and spalls can be easily handled by suction dredges, while the material on the north side can be handled by dipper and ladder dredges.

From the West Culebra slide 1,922,700 cubic yards were removed during the year, including material taken from the upper benches, making a total from the time this slide developed in October, 1907, of 8,687,600 cubic yards, leaving approximately 2,390,000 cubic yards to remove, if all the material on the top of the bank is taken out. This slide covers an area of 68 acres.

From the slide at East Culebra 1,676,300 cubic yards were removed during the year, making a total of 5,966,200 cubic yards removed since the slide first developed in January, 1907, and it is estimated that 2,000,000 cubic yards remain. This slide covers an area of approximately 55 acres and extends from the north side of Gold Hill or approximately 5,500 feet.

* * * * * * *

Due to the development of slides and beginning February 20, 1913, the split-shift system was inaugurated on shovels working in the slides and on the upper benches, so as to secure 12 hours' work per day. While this increased the cost to some extent, it was more than justified, after the decision had been reached to admit the water into the cut in October, in order to remove as much of the remaining rock in the dry as possible.

On October 1, 1913, the excavation in Culebra Cut was 94.41 per cent completed, 109,229,155 cubic yards out of a total of 115,696,455 cubic yards having been taken out, leaving on that date 6,467,300 cubic yards to be excavated, or 5.59 per cent.

Concrete work.

Concrete work in the canal locks is nearly completed, the aggregate amount in place at the close of work on October 25, 1913, being 4,481,109 cubic yards. The last concrete for the Gatun Locks proper, as distinguished from that necessary to finishing work, was mixed and placed on August 16, 1913. At the close of work on that day the total amount of concrete placed

was 2,045,485 cubic yards. The following is a statement of the concrete laid at other sites up to October 25, 1913:

	Cubic yards.
Pedro Miguel Lock	924,475
Miraflores Locks	1,511,149
Gatun spillway	237,331
Miraflores spillway	76,346

Gatun Dam.

On October 1, 1913, the Gatun Dam was 99.98 per cent completed, the actual amount of material in place, after allowing for consolidation, being 21,986,893 cubic yards.

Terminals.

The Pacific terminals are being constructed by the canal commission, and will consist of a main dry dock capable of docking any vessel that can utilize the locks, a smaller dry dock and plant for supplying coal and fuel oil to vessels, the necessary wharves and piers for commercial purposes, and permanent shops for use in connection with the dry docks.

The Atlantic terminals consist of wharves and piers at Cristobal, including the Cristobal mole, all of which are being constructed by the Panama Railroad Co. at its own expense, and the main plant for supplying coal and fuel oil to vessels. The cost of the coaling plant will be divided between the commission and the Panama Railroad Co., while the commission will furnish facilities for oil.

Col. Goethals states that due to the delay in receiving the necessary legislative authority, active construction of the terminals could not be begun until last fall, and that consequently the terminal facilities can not be completed by the time the canal is ready for passing vessels.

Fortifications.

The actual construction work was continued by the commission during the year on the gun and mortar batteries, and detailed surveys for the location of land defenses were well advanced to completion and arrangements made to begin work on July 1, 1913, on the construction of redoubts, planned by a board appointed for the purpose. During the year 416,542 cubic yards were excavated, 131,952 cubic yards of concrete were laid, 93,808 linear feet of piling were driven and 100,957 cubic yards of filling were placed by one of the dredges.

Health conditions and sanitation.

The department of sanitation, under the direction of Col. William C. Gorgas, Medical Corps, has had charge of the sanitary work in the cities of Colon and Panama, and the oiling of ditches and other water in the Canal Zone. The work of this department has been most efficient, and has resulted in the maintenance of a condition of sanitation so excellent that the working force has been maintained in the highest state of efficiency. It designates the remaining sanitary work to be done in the Canal Zone and exercises such supervision as may be necessary to insure proper performance of the work. In addition, the

department has charge of the hospitals and quarantine. The total admissions to hospitals and sick camps, including those sick in quarters, was 33,779; the daily average number of employees sick was 19.4 out of every thousand, as against 22.91 for 1911–12 and 24.77 for 1910–11, this being on the basis that the total numbers employed during the years mentioned were 54,000, 50,008, and 49,129, respectively. The total number of deaths among employees was 483, of which 36 were Americans, 58 were white employees of other nationalities, and 389 were blacks. The total number of deaths from accidents or external causes among all employees was 164, as against 154 for the preceding year. In addition, on the recommendation of the medical examining board, 183 deportations were made—134 for diseases and 49 for injuries.

The death rate for all white employees was 7.46 per thousand, as compared with 9.21 in the year 1911–12, and the death rate for white employees from the United States was 5.38 as against 5.90 in the preceding year. The death rate for black employees was 9.39, as against 10.47 in 1911–12, and the rate for all employees was 8.94 as against 10.16 for 1911–12. The death rate for the entire population of the cities of Panama and Colon and of the Canal Zone, including employees, was 22.33, as against 19.82 for 1911–12.

Force.

The force employed increased during the first nine months of the year until on March 26, 1913, the number reached the highest point in the history of the canal work—44,733 men being actually at work on that day, of whom 39,089 were commission and Panama Railroad employees and 5,644 were employees of contractors for the lock gates, emergency dams, and for other contracts connected with the work. The force fluctuated between 34,957 on June 30, 1912, and the maximum on the date above specified, and numbered 43,350 at the close of the fiscal year.

It was anticipated that in the fiscal year 1913 it would be necessary to repatriate a considerable number of laborers brought to the Isthmus under contract. The constant demand for labor obviated this, and the number of repatriations was relatively small. Portions of the canal work are rapidly approaching completion, and the force of unskilled labor has been much reduced during the past few months, and efforts have been and are being made to place the labor to the best advantage on work opening up in near-by countries. All contract laborers will be repatriated.

First operation of locks.

The gates in the west flight of Gatun Locks having been completed, the locks were operated for the first time on September 26, 1913, when a Government tug was passed through from the Atlantic channel to Gatun Lake. The gates in the east flight are not entirely completed, but soon will be.

The first lockage at the Pacific end of the canal was effected October 14, 1913, when some barges and tugs were raised through the west flight of Miraflores Locks from the Pacific entrance channel to the surface of Miraflores Lake. The gates in the east flight of these locks will soon be completed.

The gates and machinery of the east flight at Pedro Miguel Locks were in readiness to effect the lift to Culebra Cut on the same day, though it was impracticable to do so because of insufficient depth of water in the cut south of Cucaracha slide. A pipe-line suction dredge was towed through this flight on October 24. The gates in the west flight at Pedro Miguel are nearing completion.

Completion of the canal.

The increase in slides in the Culebra section during the year made it impossible to complete the excavation of the Culebra Cut by the date tentatively estimated last year, namely, July 1, 1913. On account of the nature of some of the slides it was concluded that they could be more expeditiously and economically removed by dredging, and it was decided to let the water into the cut by blowing up the Gamboa Dike on October 10, 1913. Dredges were at once put to work removing this dike; others were placed at work on either side of the Cucaracha slide, and excavation by dredges on the other slides was also commenced, the intention being to permit the passage of vessels through the canal as soon as channels of full depth and of sufficient width have been secured.

On October 10, 1913, the elevation of Gatun Lake was 67.7 feet above sea, and it is expected that with an average rainy season the lake will reach its normal level of 85 feet above sea some time in December, 1913. On October 28 the level of the lake was approximately 72 feet above sea.

An erroneous impression was caused by the announcement that the water would be turned into the Culebra Cut on October 10, 1913, as it seems to have been assumed that the canal would be practically finished on that date. Col. Goethals points out that the passage of commercial vessels is dependent upon the time when proper channels can be dredged through the slides as above indicated, and should additional slides occur they will necessarily postpone the date when this will be accomplished.

The official date of opening of the canal is still set for January 1, 1915, but it is the intention to allow vessels to utilize the canal as soon as practicable, although no definite statement can yet be made as to when this will be. It is the intention to give due advice to shipping interests as soon as any assurance can be given that vessels can be passed through the canal without unnecessary delay.

Panama Railroad Co.

The operation of the Panama Railroad Co. for the fiscal year will be shown in full in its annual report which will be submitted to you for transmission to Congress at an early date.

After meeting the total cost of operation, together with fixed charges of $113,585.39, and charges for depreciation of rolling stock, floating and plant equipment amounting to $268,707.08, the net income of the company for the fiscal year amounted to $2,179,175.50, as against $1,762,049.22 for the previous year, or an increase of $417,126.28.

During that period $2,275,905.70 was applied to additions and betterments of plant and equipment. The steamship line contributed to the above net revenue—$221,489.92—an increase over the previous fiscal period of $423,251.05 in its earnings.

The indebtedness of the company to the United States Government on account of advances for new equipment and construction and retirement of first mortgage 4½ per cent bonds remains, as on June 30, 1912, at $3,247,332.11, the company having been relieved by Congressional action from further payments on account of principal or interest.

At the end of the fiscal year the company had $2,520,216.13 of available funds in hands of designated depositaries, and in addition securities purchased at a cost of $1,590,234.75, held in a reserve fund established September 12, 1911. The increase in investment from $1,493,463.50 in October, 1911, to the present figure of $1,590,234.75 is due to the reinvestment in securities of the accumulated interest.

In December, 1912, the California-Atlantic Steamship Co. announced its inability to continue operations, and the connection was discontinued by the retirement of the California-Atlantic Steamship Co., as of date January 1, 1913.

Independent operation in the coastwise traffic was maintained through an arrangement subsequently made by the company with the Luckenbach Steamship Co. (Inc.), which immediately succeeded the California-Atlantic Steamship Co. on the Pacific side.

During August, 1912, a pile-constructed dock on the Pacific side at Balboa, built and owned by the canal commission, but operated by the Panama Railroad Co. under a lease, collapsed, involving heavy loss to the company. The Pacific Mail Co.'s steamer *Newport*, berthed alongside at the time, was wrecked and sunk. Suit has been brought by her owners against the Panama Railroad Co. for $800,000, covering the cost of her salvage and rebuilding, together with cargo and other losses involved.

The very complete equipment of the company's vessels with life-saving devices has been supplemented by increased wireless facilities and the addition of a submarine signal service.

The two large steamers purchased by the Government, renamed *Ancon* and *Cristobal*, and placed in the service of the Panama Railroad Co. for the transportation to the Isthmus of 1,000,000 tons of cement for canal construction have, in fact, carried 1,750,000 tons. They will be continued in the line so long as there is any material quantity of cement to be moved.

The building of the Hotel Washington at Colon was completed and thrown open to guests in February last.

At a meeting of the board of directors held in Washington, which I attended, every member submitted for consideration a written report embodying his views upon the policy to be followed by the Panama Railroad Co. after the opening of the canal to commerce. After careful consideration of the question it was resolved to continue, until further action, operating the railroad and steamship line as at present.

Rapid progress has been made in the work of constructing the company's extensive terminal docks at Cristobal. The substructure is completed, plans perfected and contracts let for the erection of the superstructure.

By arrangement with the canal commission the railroad contributes $1,000,000 toward the cost of a terminal coal-handling plant to be erected on Mindi Island in close proximity to its Cristobal docks, to be connected with the mainland by trestle. The plant when completed is to be operated for the joint account of the Government and railroad company.

Five hundred thousand dollars was appropriated for the construction of a bascule bridge across the canal at a point to be designated by the commission to provide communication between the company's relocated line of road and the existing railroad on the west side of the canal and to accommodate vehicular and pedestrian transit of the canal.

RIVER AND HARBOR IMPROVEMENTS.

The total amount actually expended under the direction of the Chief of Engineers in connection with the improvement of rivers and harbors during the fiscal year ended June 30, 1913, was $40,953,568.09. This is $5,309,649.41 more than the expenditures for the fiscal year 1912. Sixty-eight officers of the Corps of Engineers, or over one-third of the entire force—201—were engaged upon river and harbor work, 27 of them being employed exclusively on that character of work.

Of the 186 officers actually on duty June 30, 1913, 92 were performing duties of a military character exclusively and 94 were engaged wholly or partly on nonmilitary duty, 50 of them, or over 26 per cent, being exclusively so engaged.

In the annual report of the Chief of Engineers the different projects for river and harbor improvements are described in detail, giving a history of each project and a description of the work which has been done from the inception of the improvement to the close of the fiscal year, together with statistics of the commerce of the locality and other pertinent information.

The following table shows the different items for which expenditures were made during the fiscal year 1913:

Rivers and harbors (general, including examinations, surveys, and contingencies)		$32,253,801.43
Removing sunken vessels		115,208.81
Operating and care of canals		2,222,906.87
Operating snag and dredge boats on upper Mississippi, Illinois, and Minnesota Rivers		26,557.60
Removing obstructions in Mississippi, Atchafalaya, and Old Rivers		101,442.43
Gauging waters of the Mississippi River and its tributaries		9,072.25
Maintenance of South Pass Channel, Mississippi River		127,840.09
Examinations and surveys at South Pass, Mississippi River		11,490.00
Operating snag boats on the Ohio River		25,758.17
Prevention of deposits in New York Harbor		83,643.54
California Débris Commission (expenses)		10,123.44
Permanent International Commission of Congresses of Navigation		1,460.99
Meeting of Permanent International Commission of Congresses of Navigation in the United States		1,074.83
Claims for damages by collision, river and harbor works		2,076.84
International Waterways Commission		14,022.15
Building engineer school for river and harbor instruction		271.50
Mississippi River Commission:		
Improving Mississippi River	$4,638,163.60	
Deduct amounts reimbursable	88,748.26	
	4,549,415.34	
Maintaining and protecting levees of the Mississippi River and tributaries against floods	20,585.12	
Rebuilding levees of the Mississippi River and tributaries damaged by floods	1,366,254.67	
Improving Yazoo River and tributaries, Miss. (Yazoo River at mouth)	1,305.83	
Preservation and maintenance of river and harbor works (Yazoo River at mouth)	9,256.19	
		5,946,817.15
		40,953,568.09

In addition to the foregoing, $1,507.32 was expended in completing the enlargement of Governors Island, in New York Harbor. This work, begun in August, 1901, has cost about $1,100,000. There has been added to the island, by dredging from the harbor, about 103½ acres, which has been turned over to the commanding officer at Fort Jay as a part of the military reservation of Fort Jay.

INTERNATIONAL WATERWAYS COMMISSION.

The commission created by the act approved June 13, 1902, to investigate and report upon the conditions and uses of the waters adjacent to the boundary lines between the United States and Canada submitted its final report upon the proposed dam at the outlet of Lake Erie on the 20th of June last. This report was transmitted to Congress and was printed as Senate Document No. 118, Sixty-third Congress, first session.

The commission has thus completed the work for which it was originally organized. It is still engaged, however, under the Department of State in ascertaining, reestablishing, and marking upon the ground and delineating upon modern charts the location of a portion of the international boundary between the United States and Canada, which work was especially assigned to it by Article IV of the treaty between the United States and Great Britain dated April 11, 1908. It expects to complete that work during the current year and then go out of existence.

REVOLUTIONARY WAR RECORDS.

More than 20 years ago Congress began to provide for the concentration in one office of the scattered military records of the American Revolution by directing, in the act approved July 27, 1892, that the military records of the American Revolution preserved in the Treasury and Interior Departments be transferred to the War Department. In 1894 it was further provided that all military records relative to the armies of the Revolutionary War and the War of 1812 now in any of the executive departments be transferred to the Secretary of War to be preserved, indexed, and prepared for publication. Large accessions to the War Department collection of these records resulted from this legislation. In addition to this an effort was begun by correspondence to add to the collection by securing the temporary loan of State records in order that copies of them might be made. Several of the States loaned their military records of the Revolutionary War these records were copied, and the originals were returned to the States. Work in this line was finally suspended, however, because of the lack of funds for its successful prosecution by means other than correspondence, and because of the pressure of other work upon the limited clerical force available.

Means for continuing this work were provided by the act of Congress approved March 2, 1913, which authorizes and directs the Secretary of War to collect or copy and classify, with a view to publication, the scattered military records of the Revolutionary War, including all troops acting under State authority, and makes an appropriation of $25,000 for that purpose, to be expended under the direction of the

Secretary of War. As a preliminary to the commencement of the active work of obtaining copies of Revolutionary War records under this act, correspondence was begun with the State authorities of the thirteen original States and with the officers of the several patriotic societies of that war. That correspondence has indicated the whereabouts of considerable collections of military records of that war and affords data on which to begin the work of obtaining copies of those records; but much remains to be done in the way of correspondence with a view to locate records, and in the examination and copying of records found, before the collection of military records of the Revolutionary War in the custody of the War Department can be considered sufficiently complete for publication by the Government.

Propositions to publish the military records of the Revolutionary War have been brought to the attention of Congress frequently during the past 10 or 15 years. In 1908 the Committee on Printing of the House of Representatives had under consideration House joint resolution No. 140 and House bill No. 19082, Sixtieth Congress, first session, which resolution and bill proposed to provide for the printing of the "Complete orders of Gen. George Washington during the War of the Revolution," and of the "Rolls of soldiers, sailors, and marines, and the orders, returns, and reports, together with the official correspondence, relating to the War of the Revolution." The response of the Secretary of War (Mr. Taft) to a request of the committee for an expression of opinion on this matter is printed in the adverse report of the committee. (H. Rept. No. 1568, 60th Cong., 1st sess.)

In carrying out the provisions of the act of March 2, 1913, Capt. Hollis C. Clark, United States Army, retired, has been appointed director of the work to collect or copy and classify the scattered military records of the Revolutionary War, with a view to their publication. It is obvious, however, that the work, involving records scattered among State archives, historical societies, patriotic societies, and individual owners, not only in the thirteen original States, but elsewhere in this country and in Europe, will require years for its completion, and that therefore the matter of publication is far distant in the future.

It has been suggested that a competent advisory board of historians and archivists be appointed to supervise this work, with a representative of the Army War College and of the Naval War College as members of the board to advise in technical points, because the lessons of history are the bases of their work of training in the conduct of war.

After careful consideration of the matter, I am of opinion that it is not desirable to begin editing these records for publication, or to take other measures with a view to their publication, until the collection of those records has been made as nearly complete as possible.

It is certain that some years must elapse before the work of collecting those records can be considered as nearing an end, and consequently there appears to be no urgent necessity at the present time for the designation of a committee such as suggested, the work immediately called for being the collection or copying of original records. The officer in charge of the work will be assisted in his search by local historians, archivists, librarians, and antiquaries. It is probable that not many original documents will be *collected*, as their purchase is forbidden by the last clause of the act, and it is not to be expected that their owners will present them to the Government. It is presumed that little difficulty will be encountered in obtaining permission to *copy* the documents, and it is intended to do this by photographic or other process.

FINANCIAL STATEMENTS.

With respect to the estimates that have recently been submitted for the fiscal year 1915, I think it is very necessary to recall a most important and striking fact. In the annual reports of my predecessors for the years 1909, 1910, and 1911, reference was made to the reductions in their estimates, which in their view were entirely unwarranted from a military standpoint, but which had been made as a temporary measure of economy on account of the demand for a reduction of appropriations.

The effect of these cuts, which were made with no reference whatever to the military establishment, necessarily places me now in the position of either not asking for what the Army needs or of seeming to ask for more than my predecessors. In these circumstances, the estimates which I have submitted, after careful personal consideration, represent what in my judgment is the minimum amount that will be required to maintain the military establishment consistent with good administration.

The estimates submitted in December, 1912, for the support of the regular military establishment—that is, the Army and the Military Academy—during the fiscal year 1914, involving chiefly things consumed during the year, were $3,721,022.54 greater than the appropriations for the fiscal year 1913. The similar estimates which I have recently submitted for the fiscal year 1915 were $5,820,503.88 greater than the appropriations for the current fiscal year (1914), the increase consisting in round numbers of $4,500,000 more for pay, subsistence, and regular supplies of the Army, horses for Cavalry, Artillery, Engineers, etc., barracks and quarters, military post exchanges, clothing, and camp and garrison equipage, military aeronautics, ordnance stores and supplies, ammunition, and automatic machine rifles. The sum of $1,349,083.06 is asked for to

replace ordnance stores and supplies destroyed by fire at Benecia Arsenal, Benecia, Cal., on October 18, 1912.

All of these increases, except those for military aeronautics, military post exchanges, and replacing ordnance stores and supplies destroyed by fire at Benicia Arsenal, are made necessary by an increase in the enlisted strength of the Army within the limit authorized by the act of February 2, 1901, incident to the garrisoning of Oahu and the Canal Zone and by a slight increase in the cost of the ration.

The department is also asking for increased amounts for improvements and plant of a more or less permanent character coming under the head of "Fortifications and other works of defense," and "Military posts," etc., which include such objects as gun and mortar batteries, fire control at fortifications in the United States and insular possessions, electrical installations at seacoast fortifications, searchlights for harbor defenses, sea walls and embankments, preservation and repair of torpedo structures, casemates, galleries, etc., for submarine mines, armament of fortifications, submarine mines, fortifications in insular possessions, construction of barracks and quarters, etc., in the Hawaiian Islands, and military structures in the Philippine Islands, aggregating in round numbers $5,300,000.

There is also an increase in round numbers of $4,800,000, in the estimates for the Organized Militia, for encampment and maneuvers, equipment of Coast Artillery armories, field artillery and ammunition therefor.

All these increases, as heretofore, are appreciably affected by the constantly increasing cost of materials and supplies furnished the Army.

Annexed hereto as Appendix A is a tabulated statement showing the expenditures for the last fiscal year (1913), the estimates and appropriations for the present fiscal year (1914), and the estimates for the next fiscal year (1915). This statement shows only expenditures from appropriations made by Congress in pursuance of estimates submitted by the War Department. It does not, therefore, include expenditures from appropriations made by Congress without estimates from the War Department, known as "Indefinite annual appropriations," "Permanent annual appropriations" and "Appropriations for war claims and relief acts." Expenditures from appropriations of these three classes are included in the statements annexed hereto as Appendixes B, C, D, and E, which are complete and detailed statements of the financial transactions of the department during the fiscal year ended June 30, 1913, covering every appropriation made for the service of the fiscal years 1913, 1912, 1911, and 1910 and prior years, showing all balances from appropriations, the amounts appropriated under each title of appropriation, the amounts drawn

from the Treasury, and the unexpended balances of each appropriation remaining in the Treasury June 30, 1913, subject to requisition. These statements show also the amounts covered into the surplus fund of the Treasury from all appropriations under the control of the War Department which are no longer available or required for expenditure.

RETIREMENT OF CIVIL-SERVICE EMPLOYEES.

Heads of departments and chiefs of bureaus have many times recommended the enactment of legislation for the retirement of civil-service employees, and I find that in four of the annual reports of my immediate predecessors in the War Office the principle of retirement for superannuated employees in keeping with the growing trend of railroads and other great business organizations in this direction has been strongly indorsed.

Conferences with the bureau chiefs of this department and a study of the subject generally lead me to the conclusion that some provision for retirement of faithful employees for superannuation at a prescribed age will work to the advantage of the Government in the civil service and is demanded if this service is to be administered on better business principles, as now recognized in the case of large private business organizations.

I find that the need for a retirement law has been pressed upon the attention of Congress at almost every session during the past 27 years. Since 1886, 72 bills on this subject have been introduced in Congress, but so far as I am advised none of these numerous retirement bills has ever been favorably reported from the committee to which it was referred except the retirement measures introduced by Mr. Gillett, which were favorably reported to the House by the Committee on Reform in the Civil Service on February 23, 1909, and on April 4, 1910. Another measure introduced by Mr. Gillett during the special session of the Sixty-third Congress (House bill 3336) was referred to the same committee, but no further action has been taken.

The Gillett bills were all based upon the principle that it is for the interest of the Government to be relieved of its employees when by age they become unserviceable, or partially unserviceable; that it would lower the standard of the Government service if employees were dismissed when their usefulness becomes impaired by age unless they were assured against want; that it is the business of the employees themselves to make provision for their old age, and that the Government will hereafter, in its own interest, compel them so to do, in the case of employees who enter the service hereafter, by deductions from their monthly salaries of a sum sufficient to provide an adequate annuity, and for all employees under 70 who are now in the service, by deductions from their monthly salaries until they

reach the age of 70, and where the deductions so made are insufficient for the purpose, by such contributions by the Government in addition thereto as may be necessary to provide an annuity not to exceed $600. In the case of employees 70 years or older, and therefore subject to immediate retirement, the Government to provide the entire annuity.

On April 7, 1913, Mr. Austin introduced a bill (H. R. 196, 63d Cong., 1st sess.), the material differences between this bill and the pending Gillett bill being that the Austin bill provides for a 15 per cent increase of salary and for interest on the employee's savings at the rate of 5 per cent instead of 4. The Austin bill also makes provision for retirement for disability, while the Gillett bill does not.

On May 6, 1912, President Taft transmitted to Congress with his "unqualified approval" a retirement plan recommended by the President's Commission on Economy and Efficiency and embodied in a tentative draft of a bill which accompanied the commission's report. The essential differences between this bill and the pending Gillett bill are that its provisions were limited to the classified service in the District of Columbia, where, as stated by the President, "the loss from superannuation is greatest," the idea being to keep the plan within narrow limits during its experimental stage, with a view to its extension generally throughout the service if it should prove successful in the executive departments and offices at Washington; and that the annuity was fixed at one-half of the average annual pay for the entire period of service for annual salaries of $1,200 or less and at $600 a year for annual salaries above $1,200.

The maximum cost to the Government for the annuities for persons thus retired is estimated by the President's Commission on Economy and Efficiency, under its plan, to be $16,112,603, extending over a period of about 40 years. This does not take into account the saving to the Government that would result from a discontinuance of the payment of that part of the salaries now paid to superannuated employees which is not earned.

A modified plan of retirement which has been prepared as a result of the conferences with bureau chiefs above referred to is submitted herewith as Appendix F. In brief, this plan provides for the compulsory retirement of all employees of the classified departmental service in Washington at 70 years on an annuity of one-half of their annual pay, not to exceed a maximum of $600 where the Government pays any part of the annuity, or $900 when the employee provides it all, with the privilege of retirement between the ages of 65 and 70 on such smaller annuity as the funds to the credit of the employee will procure; all employees of the age of 70 or above in the service on the date of the approval of the act to be retired at the expense of the Government.

The Gillett bills, the Austin bill, the Economy and Efficiency Commission bill, and the War Department plan all provide in effect for a compulsory savings form of retirement instead of a straight pension provided entirely by the Government.

I feel quite sure that it is practicable to save the Government money and to benefit the Government service by establishing a retirement system. I do not believe, however, that there is any possibility of such a system being provided for in the near future by any measure that will call for larger appropriations from the Federal Treasury than would be required to pay the annuities for those now in the service—that is, the entire annuity of all those who are now 70 years of age or over, and part of the annuity of all others now in the service who shall remain therein until they reach 70 years of age; and I think it wise that the maximum annuity of which the Government pays any part should be fixed at one-half the annual salary for employees with annual salary of $1,200 or less and at $600 for those whose annual salary exceeds $1,200. All persons who accept employment under the Federal civil service after the passage of a retirement act should do so under provisions of law which would compel the accumulation of a fund derived from monthly deductions from their salaries that would make it humanely possible for the Government to retire them at 70 years of age, or before that age should superannuation or other disability require it.

Mr. Hamill has introduced and strongly advocates a bill which was referred to the Committee on Reform in the Civil Service on May 15, 1913, which provides for a straight pension. Objections have been urged against a straight pension paid for entirely by the Government that in practice it has operated unsatisfactorily in countries where it has been tried, and that it has a tendency to defeat the primary interest of the Government in the matter, which is to produce a condition under which an employee of long and faithful service may without inhumanity be removed when he reaches a condition of incapacity to render effective service. Under the contributory plan an employee after a considerable length of service would receive periodically from the fund accumulated by his contributions a sum sufficient to keep him from actual want, whereas under the straight pension plan he can not derive any benefit from the pension until he reaches the prescribed age. In other words, under the straight pension plan there would be almost the same situation that confronts us now, namely, the retention in the service, through considerations of humanity, of persons who have become incapacitated for efficient service.

ENUMERATION OF REPORTS SUBMITTED.

I submit herewith the report of the Chief of Staff, and the report made to him by the Chief of Coast Artillery; the reports of the heads

of bureaus of the War Department; the reports of department commanders; the reports of the commissioners of the four military parks, of the superintendent of the Military Academy, and of the Governor of Porto Rico.

The acts of the Philippine Commission and Legislature passed since those transmitted with the last annual report, and the report of the Philippine Commission, will shortly be transmitted.

LINDLEY M. GARRISON,
Secretary of War.

REPORT OF THE CHIEF OF STAFF.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF,
Washington, October 31, 1913.

SIR: I have the honor to submit the following annual report, which in all that relates to expenditures covers only the fiscal year terminating June 30, 1913:

GENERAL STAFF.

The duty of the General Staff has been particularly arduous during the past year. There has been a great deal of work incident to the study of existing military problems; organization, equipment, and instruction of the militia; the coordination of the work of the various staff corps with the general work of the Army; the consideration of new drill regulations; the unit system of equipment; the question of the enlistment period of reserves; the question of reserve matériel; reports on foreign armies; the conduct of education in the universities, colleges, and schools maintaining a course of military instruction; the question of establishing a proper organization of the line of communications; and many other important matters looking to the increased efficiency of the service.

It was necessary, incident to the detached-service law, to relieve a number of officers of the General Staff, whose loss has been especially felt, although the officers who have taken their places have gradually taken up the work. It is most desirable that the original number of officers allotted to the General Staff should be restored, in order that we may have a sufficient number to perform properly the General Staff work and that there may be at the War College as president a general officer who is a member of the General Staff. A number of officers pursuing the course at the War College are of such rank, experience, and length of service as to render it desirable that the president of the institution should be a general officer.

The work of the Army War College, supplementing and rounding out as it does the work of the service schools, is having a most important influence in gradually establishing a sound military doctrine throughout the service and in building up a military policy. The course for the student officers has been a comprehensive one and highly beneficial to all who are able to take it. The general effect has been to turn out an officer who looks to a well-balanced and organized army rather than the development of any one arm.

COST OF THE ARMY.

Comparative statement of War Department estimates for the fiscal year ending June 30, 1915, with estimates and appropriations for the fiscal year ending June 30, 1914.

	Estimates for 1915.	Total estimates for 1914.	Appropriations for 1914.	Increase (+) and decrease (−) of 1915 estimates against 1914 total estimates.	Increase (+) and decrease (−) of 1915 estimates against 1914 appropriations.	Increase (+) and decrease (−) of 1914 estimates against 1914 appropriations.
(*a*) War Department proper (exclusive of rivers and harbors)	$133,707,154.66	$126,167,372.20	$116,760,398.44	+$7,539,782.46	+$16,946,756.22	+$9,406,973.76
(*b*) Rivers and harbors	44,158,495.00	58,861,592.00	53,631,239.00	−14,703,097.00	− 9,472,744.00	+ 5,230,353.00
Total	177,865,649.66	185,028,964.20	170,391,637.44	− 7,163,314.54	+ 7,474,012.22	+14,637,326.76
(*a*) Includes permanent annual and indefinite appropriations of	6,643,000.00	6,051,000.00	6,051,000.00	+ 592,000.00	+ 592,000.00	
(*b*) Includes permanent annual and indefinite appropriations of	2,674,600.00	2,094,600.00	2,512,350.00	+ 580,000.00	+ 162,250.00	− 417,750.00
Total	9,317,600.00	8,145,600.00	8,563,350.00	+ 1,172,000.00	+ 754,250.00	− 417,750.00
GENERAL OBJECTS.						
Civil establishment (salaries, stationery, etc., War Department; legislative bill)	1,944,718.00	1,993,998.00	1,949,648.00	− 49,280.00	− 4,930.00	+ 44,350.00
Military Establishment:						
(*c*) Support of the Army (Army bill)	99,893,508.65	96,824,789.44	93,531,145.51	+ 3,068,719.21	+ 6,362,363.14	+ 3,293,643.93
Military Academy (Military Academy bill)	1,052,875.61	1,666,735.69	1,094,734.87	− 613,860.08	− 41,859.26	+ 572,000.82
(*d*) Militia (Army bill and $4,000,000 permanent annual appropriations)	10,854,250.00	6,536,003.09	6,035,000.00	+ 4,318,246.91	+ 4,819,250.00	+ 501,003.09
Public works (military):						
(*e*) Fortifications (fortification bill)	9,199,399.49	7,090,834.00	5,299,250.00	+ 2,108,565.49	+ 3,900,149.49	+ 1,791,584.00
Arsenals (sundry civil bill)	605,222.00	762,572.00	643,000.00	− 157,350.00	− 37,778.00	+ 119,572.00
Military posts and miscellaneous (sundry civil bill)	2,281,412.10	3,181,546.98	820,119.66	− 900,134.88	+ 1,461,292.44	+ 2,361,427.32
Public works (civil):						
Military parks, etc. (sundry civil bill)	558,060.00	520,032.00	457,060.00	+ 38,028.00	+ 101,000.00	+ 62,972.00
Buildings and grounds in and around Washington (sundry civil bill)	388,990.00	413,490.00	370,490.00	− 24,500.00	+ 18,500.00	+ 43,000.00
(*f*) Rivers and harbors (river and harbor and sundry civil bills)	44,158,495.00	58,861,592.00	53,631,239.00	−14,703,097.00	− 9,472,744.00	+ 5,230,353.00
Miscellaneous:						
National cemeteries (sundry civil bill)	335,420.00	635,620.00	292,620.00	− 300,200.00	+ 42,800.00	+ 343,000.00
(*g*) Miscellaneous objects (sundry civil bill)	1,466,798.81	1,314,260.00	1,086,065.40	+ 152,538.81	+ 380,733.41	+ 228,194.60
National Home for Disabled Volunteer Soldiers (sundry civil bill)	5,126,500.00	5,227,491.00	5,181,265.00	− 100,991.00	− 54,765.00	+ 46,226.00
Total	177,865,649.66	185,028,964.20	170,391,637.44	− 7,163,314.54	+ 7,474,012.22	+14,637,326.76

(c) Includes permanent annual appropriation for refund of soldiers' deposits	1,800,000.00	1,300,000.00	1,300,000.00	+ 500,000.00	+ 500,000.00	
(d) Includes permanent annual appropriations for militia	4,000,000.00	4,000,000.00	4,000,000.00			
(e) Includes permanent annual appropriations for Ordnance Department	75,000.00	81,000.00	81,000.00	− 6,000.00	− 6,000.00	
(f) Includes permanent annual, specific, and indefinite appropriations for rivers and harbors	2,674,600.00	2,094,600.00	2,512,350.00	+ 580,000.00	+ 162,250.00	− 417,750.00
(g) Includes miscellaneous permanent annual appropriations	768,000.00	670,000.00	670,000.00	+ 98,000.00	+ 98,000.00	
Total permanent annual, specific, and indefinite appropriations	9,317,600.00	8,145,600.00	8,563,350.00	+ 1,172,000.00	+ 754,250.00	− 417,750.00
Plus estimates for 1915 submitted for action of Congress	168,548,049.66	176,883,364.20	161,828,287.44	− 8,335,314.54	+ 6,719,762.22	+15,055,076.76
Total	177,865,649.66	185,028,964.20	170,391,637.44	− 7,163,314.54	+ 7,474,012.22	+14,637,326.76

Per capita cost of the Army (including officers and enlisted men, cadets, United States Military Academy, Hospital Corps, Quartermaster Corps, and Philippine Scouts), based on the appropriations made by Congress for the support of the Army and Military Academy, for the fiscal years 1911 to 1914, inclusive.

General objects.	Appropriated, 1911.	Appropriated, 1912.	Appropriated, 1913.	Appropriated, 1914.
All contingent funds	$62,500.00	$62,500.00	$47,500.00	$47,500.00
Army War College	10,000.00	10,000.00	9,000.00	9,000.00
United States service schools	25,000.00	25,000.00	30,000.00	30,350.00
Coast Artillery School, Fort Monroe, Va	28,000.00	28,000.00	28,000.00	28,000.00
Signal Service of the Army	250,137.69	375,140.00	375,000.00	375,000.00
Washington-Alaska military cable and telegraph system	75,000.00	125,000.00	50,000.00	50,000.00
Annunciator buzzer systems at target ranges			10,000.00	4,000.00
Pay, etc., of the Army	44,751,268.28	45,848,563.75	46,456,432.38	46,504,950.08
Mileage to officers and contract surgeons	625,855.48	600,000.00	500,000.00	550,000.00
Subsistence of the Army	9,100,178.93	9,663,222.01	9,497,080.57	9,098,517.00
Regular supplies, Quartermaster Corps	8,200,437.96	8,337,380.44	7,807,773.00	7,652,648.00
Equipment of officers' schools, military posts	10,000.00	9,350.00	6,000.00	5,700.00
Incidental expenses, Quartermaster Corps	2,225,298.85	2,100,021.07	1,886,000.00	1,960,000.00
Horses for Cavalry, Artillery, Engineers, etc	434,597.90	517,165.50	300,000.00	325,240.00
Barracks and quarters	1,605,730.22	1,856,984.73	1,700,000.00	1,923,680.00
Officers' quarters, Remount Depot, Front Royal, Va				150,000.00
Barracks and quarters, Philippine Islands	375,000.00	600,000.00	500,000.00	500,000.00
Military post exchanges	70,900.00	40,000.00	40,000.00	40,000.00
Transportation of the Army and its supplies	11,913,585.54	11,133,430.11	10,850,000.00	10,555,555.00
Roads, walks, wharves, and drainage	900,568.00	449,315.79	925,350.00	642,597.00
Water and sewers at military posts	2,584,723.00	2,250,903.27	1,702,595.00	1,534,412.00
Clothing and camp and garrison equipage	6,000,601.53	4,901,290.27	5,000,000.00	6,000,000.00
Construction and repair of hospitals	586,357.06	450,000.00	450,000.00	450,000.00
Quarters for hospital stewards	15,000.00	10,000.00	10,000.00	9,700.00
Shooting galleries and ranges	184,125.00	125,985.00	93,336.00	54,357.00
Maintenance, Army War College	12,700.00	12,700.00	10,700.00	10,700.00
Rent of buildings, Quartermaster Corps			49,587.00	49,587.00

Per capita cost of the Army (including officers and enlisted men, cadets, United States Military Academy, Hospital Corps, Quartermaster Corps, and Philippine Scouts), based on the appropriations made by Congress for the support of the Army and Military Academy, for the fiscal years 1911 to 1914, inclusive—Continued.

General objects.	Appropriated, 1911.	Appropriated, 1912.	Appropriated, 1913.	Appropriated, 1914.
Claims for damages to and loss of private property			$32,616.00	$1,652.43
Equipping Army transports with lifeboats and rafts			300,000.00	
Reimbursement to the District of Columbia for site acquired for a reformatory			33,000.00	
Medical and hospital department	$700,000.00	$700,012.00	700,000.00	750,000.00
Army Medical Museum and Library	15,000.00	15,000.00	15,000.00	15,000.00
Engineer depots	30,000.00	30,000.00	30,000.00	30,000.00
Engineer School, Washington, D. C	25,000.00	25,282.72	25,000.00	25,000.00
Engineer equipment of troops	90,000.00	90,000.00	90,000.00	50,000.00
Pontoon shed, Washington Barracks, D. C				15,000.00
Civilian assistants to Engineer officers	40,000.00	42,000.00	40,000.00	40,000.00
Ordnance service	325,000.00	337,000.00	300,118.30	300,000.00
Ordnance stores: Ammunition	450,000.00	500,000.00	250,000.00	200,000.00
Blank ammunition for maneuver camps	75,000.00			
Ordnance stores and supplies	800,000.00	800,000.00	700,000.00	750,000.00
Small-arms target practice	1,000,000.00	1,000,000.00	800,000.00	600,000.00
Manufacture of arms	1,000,055.50	750,008.56	700,000.00	700,000.00
Automatic rifles (machine)	150,000.00	200,000.00	150,000.00	
National trophy and medals for rifle contests	10,000.00	10,000.00	10,000.00	10,000.00
Pay of Military Academy	611,520.20	669,299.07	728,177.80	749,614.87
Current and ordinary expenses, Military Academy	142,593.00	138,333.00	139,807.00	138,678.00
Miscellaneous items and incidental expenses, Military Academy	51,880.00	56,812.50	55,080.00	56,230.00
Buildings and grounds, Military Academy	56,252.00	38,979.50	141,603.46	150,212.00
	95,619,871.14	94,934,679.29	93,574,756.51	93,143,380.38
Less appropriations for the following objects:				
Pay of retired officers	3,222,025.00	3,362,850.00	3,265,000.00	3,337,000.00
Pay of retired pay clerks				21,750.00
Pay of retired enlisted men	2,100,000.00	2,147,670.00	2,150,000.00	2,400,935.20
Interest on soldiers' deposits	100,000.00	100,000.00	130,000.00	90,000.00
Subsistence, etc., to National Guard officers' attending service and garrison schools	20,000.00	20,000.00	21,500.00	20,000.00
Annuity to Jennie Carroll and Mabel H. Lazear	3,000.00	3,000.00	3,000.00	3,000.00
Annuity to John R. Kissinger	453.33	1,200.00	1,200.00	1,200.00
	5,445,478.33	5,634,720.00	5,570,700.00	5,873,885.20
	90,174,392.81	89,299,959.29	88,004,056.51	87,269,495.18

The average strength of the Army (officers and enlisted men) for the fiscal year 1911, including the Hospital Corps (3,453), cadets United States Military Academy (415), and the Philippine Scouts, officers and enlisted men (5,379), amounted to 81,777 men. The sum of $90,174,392.81 was appropriated for the service of this fiscal year, making the cost of maintenance $1,102.68 per man for the year.

The average strength of the Army (officers and enlisted men) for the fiscal year 1912, including the Hospital Corps (3,474), cadets United States Military Academy (535), and the Philippine Scouts, officers and enlisted men (5,632), amounted to 87,629 men. The appropriations for this year aggregated $89,299,959.29, making the cost of maintenance $1,019.06 per man for the year.

The average strength of the Army (officers and enlisted men), for the fiscal year 1913, including the Hospital Corps (3,419), cadets United States Military Academy (556), Philippine Scouts, officers and enlisted men (5,660), and enlisted men of the Quartermaster Corps created by the Army act approved August 24, 1912 (2,219), amounted to 95,359 men. The appropriations for this year aggregated $88,004,056.51, making the cost of maintenance $922.87 per man for the year.

Based upon the authorized strength of the Army (officers and enlisted men) for the fiscal year 1914, including 3,500 enlisted men of the Hospital Corps, 613 cadets United States Military Academy (number estimated), 5,912 officers and men of the Philippine Scouts, and 4,000 enlisted men of the Quartermaster Corps, amounting to 103,651 men, and appropriations of $87,269,495.18, the estimated cost of maintenance would be $841.95 per man for the year.

The foregoing per capita cost is based upon total appropriations made for the support of the Army and the Military Academy, and would be somewhat reduced if deduction were made for that portion of the appropriations used to create reserve supplies of ordnance, quartermaster, and medical stores and supplies.

The following table shows the approximate amounts expended and to be expended for reserve supplies:

Class.	Expended fiscal year 1911.	Expended fiscal year 1912.	Expended fiscal year 1913.	Estimated expenditure fiscal year 1914.
Ordnance	$780,864.23	$796,763.46	$627,410.78	$450,000.00
Quartermaster	844,256.04	332,041.76	----------	244,952.79
Medical	284,747.84	143,049.54	137,784.75	100,000.00
Total	1,909,868.11	1,271,854.76	765,195.53	794,952.79

Deducting the total allowances for reserve supplies, amounting to $4,741,871.19, from the total appropriations ($354,747,903.79) for the fiscal years 1911 to 1914, inclusive, the average annual cost per capita would be $950.03 per officer and enlisted man, based upon the average annual strength of the Army for the years named, including the Hospital Corps, cadets, United States Military Academy, Philippine Scouts, and enlisted men of the Quartermaster Corps.

The foregoing figures represent the approximate cost of enlistment, equipment, support, and maintenance of the personnel of the Army of every character, including muster, pay, subsistence, transporta-

tion by land and water, the purchase and repair of ships, boats, and other vessels required for the transportation of troops and supplies and for official, military, and garrison purposes; expenses of sailing public transports and other vessels; clothing and quartermaster supplies; ordnance stores and ordnance equipment; manufacture of small arms and ammunition; rifle practice; medical and hospital supplies and treatment; signal service and aeronautics; every contingent expenditure connected with the Military Establishment; the maintenance of the War College, Army Medical School and Library, service and garrison schools; pay of cadets and current and miscellaneous expenses of the Military Academy, and the expenses of upkeep of the grounds and buildings of the Military Establishment and Military Academy.

Permanent land improvements incident to the establishment of military posts, forts, arsenals, sites for fortifications, emplacements for heavy ordnance, armament of fortifications, gun and mortar batteries, fortifications in insular possessions, barracks and quarters for seacoast defenses (in the United States and the insular possessions), and all other public improvements of a permanent nature under the War Department, appropriations for which are classed under the general head of "Public works," are, as a matter of course, not included in the foregoing statement, as they may be considered as not directly pertaining to the cost of the personnel of the Army.

It will be noted that the average per capita cost of the Army has been gradually decreasing since the fiscal year 1910, in which year the cost averaged $1,142 per officer and man. Last year it was $922.87; this year it is estimated at $841.95. Had the 1910 average per capita cost been maintained throughout the fiscal years following it would have necessitated appropriating the following amounts, based upon the average strength of the Army for the fiscal years 1911, 1912, and 1913, and the authorized strength for the fiscal year 1914:

Fiscal year 1911, $93,389,334.00 instead of $90,174,392.81, as appropriated.
Fiscal year 1912, 100,072,318.00 instead of 89,299,959.29, as appropriated.
Fiscal year 1913, 108,899,978.00 instead of 88,004,056.51, as appropriated.
Fiscal year 1914, 118,369,442.00 instead of 87,269,495.18, as appropriated.

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ARMY LEGISLATION.

ENLISTMENT AND RESERVES.

It is believed that legislation should be had modifying the present enlistment contract so as to give an enlistment which will permit a man's transfer to the reserve after a year's service, provided he is a well-trained soldier, as determined by his company and post commanders. A man so transferred would serve the balance of his enlistment period with the colors in the status of a soldier on furlough without pay, but under obligation to come to the colors in case of war, and for instruction at maneuvers, if deemed advisable, for not to exceed 6 to 10 days every other year. Whatever system of reserves is adopted, it should provide ultimately, when the reserve is in full working order, for a total reserve service of at least two and one-half times the service with the colors. In the early stages of building up a reserve it will be necessary to enlist men directly in the reserve—men now in the population who have had previous military service. The pro-

vision for a reserve must provide for a paid reserve for all men except those who are serving the balance of their active enlistment in the reserve on a status of furlough. It is not believed that men will enlist in the reserve under present conditions. The amount to be paid reservists must be determined by Congress. It need not be much, and it is safe to say that we can secure a reserve under conditions as to cost which will give us 10 reservists for the cost of 1 man with the colors. The reservist must be assured that he will be called upon for service only in case of war, and possibly for an instruction period every other year of not to exceed from 6 to 10 days, during which period he would receive full pay and allowances, transportation, etc. According to a rough estimate by the Adjutant General's department, there are now in the civil population about 90,000 men who have left the service during the past 10 years and are still of military age. This is believed to be a conservative estimate. In addition, there are large numbers of men who have had service during the Spanish-American War, in the Philippine Volunteers, and others who have had other military service, from which a reserve of well-instructed men could be drawn if any inducement is given them to join the reserve. It is unfortunate that the wording of the present law is such that it is to the financial advantage of a man to keep out of the reserve; i. e., a man who intends to come to the colors in time of war will get more money if he stays out of the reserve and comes back from a civil status at any time within six years of his discharge than will the man who serves in the reserve during this period. The man in the reserve is, moreover, on the status of a soldier, whereas the men who do not enlist in the reserve are entirely separated from the service. All this tends to keep men out of the reserve. We can not secure valuable service for nothing.

One thing is absolutely certain, and that is that we must have an adequate reserve if we are to consider ourselves in any way properly prepared for a possible war. The department has now under consideration a proposed modification of the enlistment contract, with reserve features, which it is hoped will be presented for the consideration of Congress during the coming session. The necessity for a reserve having been accepted by Congress in the legislation enacted during the last session, it now only remains to perfect it. This, in my opinion, is the most important Army matter which has been before Congress in many years. Our mobile army within the limits of the continental United States, while efficient, is so small that it only amounts to about 6 per cent of the force which it would be necessary to call to the colors in the early stages of a war with a first-class power. The militia could probably furnish 19 per cent, leaving a balance of practically 75 per cent to be made up of men necessary to fill up the Regular Army and militia to full statutory strength and of volunteers.

It is only necessary to give this matter superficial attention to appreciate the extreme gravity of the present situation and the necessity for providing an adequate reserve of trained men for both Regular Army and militia.

To fill up organizations to full statutory strength with uninstructed men would be to destroy largely their efficiency; to fail to fill them up would be to leave them so small that they would have relatively little power. They must be filled up to full statutory strength by

instructed men to attain their full efficiency, and the losses of the first months must be made up from the same class of men. This can be done only through a reserve. We must remember that we have never yet been engaged in war with a first-class power prepared for war under conditions in any way approaching the conditions of military preparedness which exist among civilized nations to-day.

The present system does not represent either a wise or economical expenditure of the funds intended to insure military preparedness.

I have also the honor to invite attention to the necessity for building up, with as little delay as practicable, a reserve of officers qualified to serve as company officers of reserves or volunteers. If we were called upon to mobilize to meet a first-class power, we should require immediately several thousand officers; where are we to get them? This is a matter of vital importance, and one which should be attended to at once and not left to the rush, hurry, and confusion preceding a war. I am of the opinion that it would be practicable to select from the graduating classes of those military schools at which we have officers of the Army as military instructors, on the recommendation of such instructors, 400 men each year who could be commissioned as provisional second lieutenants in the different line branches of the Regular Army, including Coast Artillery, for a period of one year, subject only to physical examination, to receive the full pay and allowances of a second lieutenant, to be junior to all second lieutenants of the Regular Establishment, and to be discharged at the end of one year with a certificate of proficiency, if they merit it, as company, troop, or battery officers of militia, volunteers, and the Regular Establishment in war. I believe that a proposition of this kind on the part of the Government would meet with a generous response and that it is a practicable way of providing a reserve of officers. The results obtained would justify the expense. The men thus trained would have had from two to four years' military instruction under officers of the Army, plus a year in the Regular Establishment; certainly good preparation at relatively little cost. From these young men selection could be made, from among such as desired permanent appointment to the Regular Establishment, to fill vacancies from civil life, such appointment to be made subject to the prescribed mental and physical examinations.

One thing is certain: We shall require many thousands of officers, in addition to those of the Regular Establishment, and steps should be taken to provide them in time of peace and not throw away thousands of lives on account of lack of most necessary preparation through use of means ready to our hands.

RESERVES.

SUPPLIES.

The urgent deficiency at present is, as it has been for many years, in the shortage of Field Artillery guns and ammunition, a shortage of such vital importance as to constitute a grave danger and to jeopardize seriously the possibility of success in case of war with a well-equipped nation. The matter has been emphasized in previous reports, and I again most earnestly invite attention to the alarming condition of shortage in these absolutely essential supplies. The

present appropriation bills carry larger appropriations than heretofore asked for, but even if granted in full they will supply only a portion of our deficiency in this particular. Adequate provision to meet this shortage should be made without further delay. It must be done quickly. Several years will be required at best, and it is earnestly hoped that the full amount requested this year will be granted.

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TACTICAL ORGANIZATION OF THE ARMY AND ITS DISTRIBUTION.

The plans put into effect last year have been, on the whole, satisfactory. Minor modifications have been required, but the ultimate effect is going to be a decided improvement in efficiency.

Hawaiian Islands.—The garrison of the Hawaiian Islands has been increased by one regiment of Infantry, and there are now also eight companies of Coast Artillery on duty in the islands. Three additional regiments of Infantry will have to be sent to the islands to complete the Infantry garrison unless a larger regiment is authorized for the insular possessions, in which case only one regiment more of Infantry will be required.

Panama Canal Zone.—The garrison in the Panama Canal Zone has not been materially increased as quarters are not yet available. It was expected that canal buildings would be available this fall, but recent information is to the effect that no considerable number will be available until next spring. It is desired, in garrisoning the Canal Zone, to utilize as far as possible the buildings now in use by the canal force. Estimates have already been presented for the necessary barracks and quarters for the Coast Artillery, as these troops will be so placed that it will not be practicable to use canal buildings to any extent.

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CAVALRY.

During the past year the arduous patrol duty along the southern border has been efficiently performed in great part by the Cavalry. Six regiments have been and are now actively engaged in this work, while a seventh is with the division mobilized at Texas City. This service has entailed hardships on the mounts and will necessitate a larger estimate for purchase of horses. Two of the regiments most deserving of change of station to a northern climate, the Second and Fifth, are now under orders to exchange with the Tenth and Fifteenth.

The marked improvement begun several years since in horsemanship and betterment of mounts has been noteworthy during the past year. In this matter the Mounted Service School at Fort Riley has been of the greatest value. The importance of this school would be enhanced if it were situated in a section of the country where riding and riding competitions are more general, and the removal of the Mounted Service School to such a region is recommended.

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FIELD ARTILLERY.

The Field Artillery has made satisfactory progress during the past year so far as its training is concerned. This progress has been manifested especially in increased efficiency in target practice. The

modern field gun is a weapon of such great accuracy and rapidity of fire when handled by a highly trained personnel that it is impossible for any troops, without such losses as are prohibitive, to advance over a terrain swept by its fire. It is therefore necessary not only that the existing Field Artillery be trained to the highest possible degree but also that our armies be furnished with an adequate amount of Field Artillery sufficiently trained to at least neutralize the fire of any field artillery that may reasonably be brought against us.

We are slowly accumulating a reasonable supply of guns, but, as fully set forth in my last report, the Organized Militia is almost hopelessly behind in the number of batteries which they should maintain in proportion to their infantry strength, and the regular Field Artillery can not at its present small strength furnish even half the guns necessary for the Regular Army. Without these guns our Army as a machine is not efficient. One of the most important parts is lacking

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As to matériel and ammunition, the existing shortage constitutes a serious menace to the public safety in case of war. Once hostilities have begun with a first-class power, there will be no opportunity to purchase abroad nor time to manufacture at home. Even with all available plants in the country running at maximum capacity, so much delay would ensue as to be fatal to our hopes of a successfnl campaign. The present shortage, which is one of the most serious features of our military situation, constitutes a grave danger, yet it is one readily relieved at the present time by providing adequate appropriations. Later the relief may be too late. Were war to come while we are so inadequately provided with field-artillery matériel, and especially with ammunition, our chances of success would be seriously prejudiced.

The United States has adopted the proportion of 3.16 guns per 1,000 gross Infantry and Cavalry. This is a smaller proportion than that adopted by any other first-class power in the world, yet it is all that we are striving to obtain. Neither are we asking for a large reserve supply of Field Artillery ammunition, but merely for the amount that the guns must have on hand at the time they take the field. While we are gradually and slowly accumulating a reasonable supply of guns (having now about one-half the number desired), the ammunition for these guns already manufactured is far behind. I invite attention to my remarks on this subject in last year's report, and also to my statements in hearings before military committees of Congress. During the past year, in converting the Fifth Field Artillery from a light regiment to a heavy one, it was necessary to issue obsolete guns simply because we have not sufficient ammunition to supply the modern heavy guns and howitzers already manufactured. We can, within a year, from deliveries of ammunition now under contract, provide our regular batteries with their initial field allowance, but we can only partially supply the batteries of the Organized Militia with their field allowance, and can not supply a single round to any volunteer batteries that may be raised. There is no reserve supply for either Regular, Militia, or Volunteer batteries, and it must be remembered that "guns without ammunition are a burden to their friends, preparatory to becoming a trophy to the enemy." We

are not asking for a reserve supply of ammunition to last during a campaign, but merely for enough to enable guns already manufactured to take the field. Every gun may be expected to fire 200 rounds in a day's battle, and all of our limited number of guns may be expected to be in action within such a short time of each other as to preclude the feasibility of taking ammunition from one gun and diverting it to another, in an effort to relieve the shortage. Ammunition used during the day must be replaced from the general supply during the night; in other words, there must be on hand at the outbreak of war sufficient ammunition for at least one engagement. This is not now the case. It must never be forgotten that battles are won only by superiority of fire, and modern battles show that the Field Artillery alone furnishes this superiority in the early stages, and contributes to it during the entire action. Infantry, when confronted by an enemy strong in Artillery, can not even advance to the position where their weapons first become effective, without prohibitive losses, except under the protective fire of its own Field Artillery. It may be said, therefore, that success in war will depend more than ever before on Field Artillery.

But even assuming that guns and ammunition will be supplied in reasonable amounts, the guns will not operate themselves, and the previous training of the personnel to utilize efficiently the tremendous power of the guns is absolutely essential.

In so far as the Regular Army is concerned, there are within the continental limits of the United States 21 regiments of Infantry and 12 of Cavalry. If these troops were organized into three Infantry divisions and two Cavalry divisions, they would require eight battalions of light, six battalions of horse, one battalion of mountain, and six battalions of heavy Field Artillery. When the Field Artillery for the Panama garrison leaves the United States there will be left in this country but two battalions of light, one regiment of horse, one regiment of heavy, and one battalion of mountain artillery. There is therefore existing a shortage of six battalions of light, three of horse, and three of heavy Field Artillery, and a reorganization of the existing horse and heavy regiments, so as to give to each regiment a three battalion organization of two batteries each. Field Service Regulations prescribes a certain amount of Field Artillery for each Infantry division; yet the shortage of Field Artillery is so great that not a single division in the Regular Army has the prescribed amount, and one division has no Field Artillery at all. Were we forced into hostilities with any first-class power, we should have to organize many volunteer batteries. It is idle to think that such units, hastily created on the outbreak of war, will have much real efficiency unless they have a nucleus of trained men. These trained men at present do not exist, and they will not until our regular Field Artillery has been sufficiently increased to provide for the needs of the Regular Army and to furnish a nucleus of trained reserves to man, partially at least, and officer volunteer batteries. It is our settled policy to depend for defense upon a small Regular Army and a large citizen soldiery brought into the service of the United States upon the outbreak of war. Such soldiery is of small value unless we can provide it with arms and ammunition. This we can not do now in the Field Artillery. At the present rate of appropriations it will take many years to create a reasonable supply of guns, carriages,

and ammunition. And in addition, to avert catastrophe, we must have sufficient organizations of the Regular Army, training men in time of peace to come to the aid of the new batteries when organized.

To summarize the recommendations made above, and also to include others not discussed, it is believed that the vital needs of the Field Artillery are:

(*a*) An increase of twelve battalions (in five yearly increments).

(*b*) The organization of the ammunition service.

(*c*) The appropriation of moneys sufficient to provide ammunition for the existing guns when they take the field.

(*d*) Legislation to furnish the desired officers and trained personnel for the mobilization of Field Artillery in war.

Attached see Appendix 8, containing the views of Gen. Hunt, who was Chief of Artillery of the Army of the Potomac from September 5, 1862, until the close of the Civil War, for, due to defects in the organization, equipment, and supply, and the lack of officers, the chief of this great and expensive arm found it defective and could not make efficient use of it.

COAST ARTILLERY.

The Coast Artillery service for the past year has maintained its high standard. Its efficiency has attracted the attention of other Governments, especially those of South America. An officer of the Coast Artillery of the United States is giving instruction to the Chilian coast artillery, and two Chilian officers are taking the course of instruction at the Coast Artillery School. The Government of Brazil has shown active interest in the coast defenses of the United States. Permission has been granted the Government of Brazil to send two officers to the Coast Artillery School to enter the next class.

There is no better measure of efficiency of this arm of the service than the results of its target practice. This has been maintained at a high average percentage of hits. For the first time the Coast Artillery as a whole has been required to have practice at night at moving targets. It is encouraging to note that the reports received give evidence that night practice is almost as accurate as day practice.

The administrative organization of the Coast Artillery has been modified during the past year by grouping the fortifications into three districts. The object of this modification is to obtain improved administration and better results in maintaining efficiency and in standardizing means and methods of Coast Artillery service. All of the fortifications on the Atlantic coast from Maine to New York have been grouped into one district, known as the North Atlantic Coast Artillery District, those from the Delaware River to Texas have been grouped into a second district known as the South Atlantic Coast Artillery District, and those on the Pacific coast into a third, known as the Pacific Coast Artillery District. The officers in command of these districts, respectively, are charged with all matters bearing upon the instruction of the personnel and the efficiency of the armament and its accessories. The results have been encouraging and justify the arrangement.

A further administrative change has been made during the year in providing that the administrative and staff duties of coast defense

commands shall, in so far as Coast Artillery officers are concerned, be conducted as a unit within each coast defense command. Some coast defense commands include two or more forts. Each fort has had, heretofore, its own commander and a separate administrative staff. The change provides for but one commander of these smaller fort groups and but one set of staff officers. Now all staff duties connected with the furnishing of supplies, their storage and their issue, are performed by one set of staff officers at the headquarters of the coast defense commander. The effect of this has been to reduce materially the paper work connected with such staff duties, and to release quite a number of Coast Artillery lieutenants from staff duties to their combatant duties.

The approved system of fixed coast defenses, both for home and oversea ports, is well advanced toward completion. In the United States proper additional fortifications will be necessary for the entrance to Chesapeake Bay and for San Pedro, the port of Los Angeles. Appropriations have been made to initiate both of these projects; these fortifications should be pushed to completion at as early a date as practicable. The increasing importance of the city and port of San Diego and its strategic location call for consideration with a view to strengthening the coast defenses there by additional heavy batteries.

A board of officers of the Army and Navy appointed for the purpose of preparing a scheme of defense for the naval base of Guantanamo, Cuba, submitted its report in April, 1913. The estimated cost of the project for the Army, including not only coast defenses but also land defenses and barracks and quarters for the mobile garrison, is $10,275,000. The first necessity for the development of Guantanamo as a protected naval base is the procurement of a supply of fresh water adequate to the needs of the proposed establishment. The board believes that such a supply can be secured.

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INFANTRY.

The discipline and instruction of this arm have been satisfactory throughout the past year, with the exception of instruction in the use of the bayonet, which continues to be unsatisfactory.

The Infantry organizations in the Philippine Islands have been brought up to their full statutory strength, and an effort is being made to place those in the Hawaiian Islands upon a similar footing, also the regiment in the Canal Zone; but the difficulty experienced in securing recruits during the year has made progress rather slow in this direction.

The new Infantry equipment has been issued to 14 regiments, and its issue will be gradually extended to the remaining regiments.

It is most essential to have such increase in the Infantry as will enable us to complete three tactical divisions within the geographical limits of the United States. If the regiments abroad are maintained at full statutory strength, ten additional regiments will be required to accomplish this; if, however, the foreign service regiments are brought up to a maximum of not less than 200 or more than 250 men per company, this can be accomplished with an addition of six regiments.

The question of increasing the foreign service regiments on the lines above indicated is now being considered. It presents a regiment abost the size of the French and German regiments. It will reduce tue ultimate number of Infantry regiments on foreign service to nine, and enable us to keep them all fully officered. As these regiments can not in all probability be reenforced in the early stages of war, it is believed that they will be none too large to meet the demands which may be made upon them as infantry operating in certain prescribed limits. They will be, in effect, fortress infantry. Moreover, the large company is used in the best foreign armies, where infantry organization is not only of the greatest importance, but a matter of constant care and study.

A very considerable saving can be made in the initial cost by use of the large regiment—something over $1,200,000. It will also result in a larger number of organizations at peace strength being left in the country, for possible expansion in case of war.

The question of equalizing the foreign service of noncommissioned officers not only of Infantry, but of the other arms, is now under consideration, and a procedure will probably be announced under which sergeants serving in organizations abroad will be transferred to the United States without loss of grade, their place being taken by noncommissioned officers in the United States, thus avoiding a great injustice to this most important and valuable portion of our enlisted personnel.

With reference to enlisted men serving in the Philippines, it is believed they should, when discharged, if they so desire, be reenlisted in Infantry regiments serving on the Pacific Coast. This would enable transfer to the home country for the necessary change of climate, with the minimum of expense, as the move is made almost entirely by transport. It is believed the best interests of the Government will be served by not permitting, under any circumstances, men or officers to serve in the Philippines more than six consecutive years. Failure to observe this rule will probably result in a degree of disability incident to climatic effects which would ultimately cost the Government more than the slight cost of transfer.

The desirability of maintaining the foreign service organizations has been referred to in previous reports; nothing has been experienced in the past year which in any way argues against such continuance. It gives us on the ground an organization, two-thirds of which are veteran and thoroughly familiar with the conditions under which serving. It also permits regularity and uniformity in the detail of officers for foreign service and will lead to far greater permanency in the location of home regiments. In addition, it should result, ultimately, in the development of a considerable amount of regimental recruiting, which, if successful, will effect economies.

The garrison for the Philippines, Oahu and Panama, are all from our Army of 100,000 men and we shall require this full number in the immediate future if home organizations are filled up with needed units and kept at reasonable strength.

PHILIPPINE SCOUTS.

These excellent native troops have maintained their previous high standard of efficiency, and have always shown themselves to be loyal, willing troops, equal to any responsibility placed upon them. In view

of the demands upon the Infantry of the line incident to providing garrisons for the insular possessions, the Canal Zone, and Alaska, and the great desirability of stronger companies in the home regiments, at least until an adequate reserve has been secured, I am of the opinion that the Philippine Scouts should not be included in estimating the strength of the Army. Their exclusion would permit the organization of the Infantry, Field Artillery, and Engineers necessary to complete three tactical infantry divisions in the continental United States, which should be done as soon as possible.

NONMILITARY DUTY—EXCESSIVE PAPER WORK—POOR ADMINISTRATIVE METHODS.

The formation of a service corps has resulted in a large measure in relieving troops from certain classes of work which, while not strictly military, has had to be performed at Army posts and in the field. The effort to reduce the amount of paper work in the Army is being continued, and a constant advance has been made in this direction. A board is still at work on this most important matter—important because paper work now absorbs altogether too much of the time of officers and men—time which could be spent to much greater advantage in military work. The new muster and pay rolls have tended greatly to simplify work connected with the preparation of these papers. The unit system of administration in Coast Artillery districts has also been applied and has resulted in a great reduction in the amount of correspondence and returns or will be a saving in personnel. Progress has also been made in other directions, notably in reducing the number of returns for property at posts through the establishment of a property officer at each post who is responsible for most of the property. There still remains, however, much to be done. Considerable latent opposition comes from the clerical force itself, which seems to fear that a reduction in the paper work will be attended by a loss of position. The recommendations which I have hitherto made have been to the effect that no clerks be discharged, but that no new appointments be made until the total number has been reduced to the lowest number consistent with the efficient performance of duty.

There is still altogether too much concentration of administration. The scope of the administrative authority of the department commanders should be amplified, and I believe that the administration of all military departments should ultimately be placed upon the same status as is that of the Philippine Department and that of Hawaii. The only important objection to this has been incident to a desire to control the construction of barracks and quarters, etc., thereby securing uniformity of type, and obviating changes due to individual ideas and policies of department commanders. It is believed that this can be obviated by necessary orders.

It is most important that existing utilities of towns and cities adjacent to military posts should be made use of, and that the number of independent plants, such as light and power plants, should be reduced to the minimum. The apparent economy in the maintenance of these is not always real economy. There is always a loss of military efficiency through the detail of officers and men to supervise them, and a money loss through the depreciation of the plant, which is sometimes not fully realized. In case of the withdrawal of the troops,

the expensive plant is left idle and subject to deterioration—a condition which would not pertain to such an extent when local public utilities are made use of. At military stations near cities quarters for officers should be rented and the officers given commutation, and the construction and upkeep of Government quarters avoided to as great an extent as possible. The present system involves many drains upon service, personnel, and resources not evident at first sight. Much more time should be given to the instruction of troops under arms. More of this work, especially of an intensive character, will put more vigor and interest into military life, and shorten the time needed for developing a well-instructed soldier. It will give an added interest to the daily work of the enlisted man and tend to prevent desertion. If soldiers are to be impressed with the seriousness of their profession they must live in an atmosphere which indicates keen interest and intense application on the part of their superiors.

ORGANIZED MILITIA.

GENERAL REMARKS.

The strength of the Organized Militia computed from organization records submitted by Federal inspectors at the time of the last annual inspection, made January 1–May 31, 1913, in accordance with the provisions of section 14 of the militia law, was 9,110 officers and 111,662 enlisted men, a net decrease of 32 officers and 1,048 enlisted men, as compared with the strength in 1912. This decrease has occurred, in many instances, from the elimination in compliance with law, of organizations and personnel found to have fallen irremediably below the very moderate standard of the War Department.

INSTRUCTION.

During the year there has been improvement in both the theoretical and practical instruction in the Organized Militia. This is believed to be due, first, to increased interest on the part of the Militia, and, in part, to the establishment in the several States of systematic and progressive courses of instruction formulated and supervised by regular officers detailed as inspector-instructors under the provisions of the act of Congress approved March 3, 1911.

PRACTICAL INSTRUCTION.

Officers' camps of instruction have been held in many States, and the results obtained confirm the statement which has been made before, that they are one of the most valuable practical means of supplementing the theoretical course that have been devised. In a number of instances, under special authority of the Secretary of War, selected enlisted men have pursued special courses of study.

State camps of instruction have been held by most States, except for certain organizations of Cavalry and Field Artillery, which participated with Regular troops in joint camps for these arms. The field instruction has been under the provisions of section 14 of the militia law, as a rule the regiment being the largest tactical unit present.

In a few States there were divisional or brigade camps or maneuvers. It is thought that on alternate years at least more benefit is derived from regimental camps of instruction where the time is devoted to field instruction of the companies, battalions, and finally the regiment. It

has been noted that the greatest tactical weakness developed in the Organized Militia is in troop leading, and this can best be taught when the time allotted is wholly used in training the units above mentioned.

Much attention has been given by a number of States, notably Massachusetts, New Jersey, New York, and Pennsylvania, to fire problems. These are most valuable as a means of illustrating the methods to be employed in fire control, discipline, and effect. They should be included as a part of the program at every camp for field instruction.

It is regretted that the important subject of target practice shows but little progress. Of the total enlisted personnel armed with the rifle, about 60 per cent failed to qualify, even in the lowest class of those completing the course, i. e., as third classmen, and of this 60 per cent fully one-half failed to participate at all. Inasmuch as rifle practice is recognized as being one of the most important elements in the training of the Infantry soldier, the significance of the above figures is apparent at a glance and gives occasion once more for the oft repeated military maxim, that the best trained troops for duty in the field are not those whose training has developed an exclusive minimum of expert rifle shots, but on the contrary those whose training has produced a maximum of average marksmen.

INSPECTOR-INSTRUCTORS.

The necessity for a greater number of inspector-instructors of the Organized Militia has become so pressing that it is believed if present conditions of the service, which appear to render it impossible to secure further details of officers for the purpose, are to continue, legislation should be secured providing for an increase of officers to the Army sufficient to fulfill the demands of the States for these inspector-instructors.

Reverting to the legislation of March 3, 1911, which provided for an increase of 200 officers to the Regular Army, it will be remembered that one of the principal reasons assigned for the necessity of such increase was the demand of the Organized Militia for the detail of Regular officers for their instruction. The number of increased officers originally asked for in the report from the Committee on Military Affairs accompanying Senate bill No. 9331, was 612. And in the final appropriation act granting an increase of 200 officers, the President is authorized to detach inspector-instructors not to exceed one for each regiment and separate battalion of Infantry and an equivalent number for the other branches of the service.

If the above provision were carried out, the detail of 187 officers would be necessary, but at present there are 78 officers on this detail.

The policy of the War Department has been clearly stated to carry into execution, so far as practicable, the law on this subject, but an attempt to do this has resulted in failure, as the requisite number of officers are not available.

The demand for these inspector-instructors is incessant and general, and the Militia Division finds it unable to comply. Much unfavorable comment has been indulged in by the Organized Militia on the failure of the War Department to supply them with the number of these inspector-instructors contemplated by the law, and remedial action should be taken if possible.

SERGEANT-INSTRUCTORS.

The services of the sergeant-instructors during the past year, as heretofore, have been rendered in a most efficient and satisfactory manner. This is evidenced by the increased demand for the detail of sergeant-instructors and many requests for re-detail of those now on duty with the State troops. The increased demand resulted in an increase of the number available for duty with line and auxiliary troops.

INFANTRY.

The Infantry returns of the Organized Militia of the several States show a strength of 6,234 officers and 88,225 men, a total of 94,459. During the year there has been a gain of 18 officers and a loss of 3,402 enlisted men.

In many States there is an attempt to maintain too many Infantry organizations, considering the strength of the enlisted personnel, with the result that it has been impossible in many cases to keep companies at the prescribed minimum strength of 58 men. If this prescribed minimum strength were maintained, the Infantry of the Organized Militia would consist of 101,016 enlisted men, instead of, as at present, 88,225. It is, therefore, evident that this failure to comply with the regulations results in a loss of 12,791 effective Infantry upon which the Federal Government counts, should the Organized Militia be called out for national use.

The necessity of maintaining companies at the strength (58 men) which has been prescribed as the least possible for effective training and to serve as a nucleus for war-strength companies, will be realized when it is stated that the 12,791 men constitute about the Infantry strength prescribed by Field Service Regulations for one division, and 16,500 at full statutory strength.

The efficiency of the Infantry as regards instruction, organization, and equipment, while showing progress during the past year, can not be said to be such as would warrant the Federal Government in counting on its immediate availability as a whole for war purposes. Much remains to be done in way of training, organization, and equipment. Its efficiency varies widely; in a few States it has reached a standard where a very short period would suffice to make it available for field purposes; in others such use can not be considered for a period to be measured in months.

Recent orders promulgated by the War Department through the Division of Military Affairs have pointed out measures for the correction of the foregoing, and it is hoped that the subject will receive the serious consideration of the State authorities.

FIELD ARTILLERY.

How to provide an adequate and efficient Field Artillery continues to be a most vexed problem. It is so, due to the great cost of maintenance compared to the other arms and to the constant opposition on the part of individual States to spending so much money for what they regard as purely Federal purposes. All other arms are better adapted to State police purposes, and hence the State authorities look upon their creation and maintenance with greater favor than in the case of Field Artillery. While this view is not without some

justification, yet it is far from being entirely correct. It fails to take into account the dual relationship of the Organized Militia to the State and to the Nation. Each of these Governments has the right to the services of this force. Each contributes toward its support, and each is, therefore, entitled to voice its desires, particularly as to the arm of the service to be maintained; but as the Federal Government is without power to force its desires in this respect on the States, the natural result is an entirely inadequate provision for the Field Artillery. Small forces, such as each State needs to maintain, have little need of Field Artillery; large forces, such as are obtained by combining the Organized Militia of all the States to serve a Federal purpose, must have it. Efforts are being made to induce the States to take a broad view of the situation, and to realize that the Federal Government does not contribute its financial aid to the Organized Militia for the purpose of enabling each State to maintain a State police force but does contribute for the purpose of obtaining a force for national defense. In such a force much more Field Artillery is necessary than now exists. Not only should each of the 12 divisions of the Organized Militia, elsewhere spoken of, have its full complement of this arm but there should also be in existence the heavy Field Artillery units necessary for the field armies that will be created by combining these divisions.

While there has been only a small growth during the year in the number of batteries maintained, there has been considerable growth in efficiency. More officers than ever before attended officers' camps of instruction. Target practice was more generally held and 20 officers graduated from the School of Fire.

A target range of about 25,000 acres was leased for the summer in the northeastern part of Pennsylvania and a joint Field Artillery camp of Regular and seven batteries of Organized Militia was held, and excellent progress made. There are now 63 batteries, including those being created in the Organized Militia, and for the first time by the creation of two regiments in New York and one in Minnesota, the Organized Militia of this arm has been extended to above a battalion. Nearly one-third of these batteries are in New England and New York. The remainder of the country is far behind in the quota of this arm. Since the Infantry is the arm that is especially interested in maintaining an adequate and efficient Field Artillery in case the Organized Militia is used for national defense, attempts are being made to interest the Infantry in the development of the Field Artillery. The Infantry is more dependent for its success than ever before on its Field Artillery. It is regarded as necessary to ultimately modify existing Federal laws relating to Federal allotments to the militia, so as to extend special aid to the Field Artillery. In no other way, in my opinion, can this arm be developed to the extent that is necessary to make an efficient fighting force of the entire Organized Militia.

CAVALRY.

Men in the Cavalry of the Organized Militia, like their confreres of the foot service, are paid and subsisted only when on duty. But mounts must be subsisted and cared for the year round if they are to be available and in a proper state of training when called upon for

military service. In other words, although militia troopers under ordinary peace conditions can be maintained at a fraction of the cost of regular troopers, suitable militia mounts must cost approximately the same as those used in the permanent establishment. It results from these conditions that it costs very much more to maintain a militia cavalry organization of given strength and efficiency than an infantry one of equal strength and efficiency, and that the cost of Cavalry as compared with that of Infantry in the militia is far greater than the relative cost of these arms in the regular service.

Considering the heavy cost of mounted militia cavalry and its restricted usefulness for purely State purposes, it seems quite evident that the States, if they consulted only their own interests, would prefer to maintain their militia infantry in predominating proportions. Even taking into account the very laudable desire of the States to help out the Federal Government in its effort to encourage the maintenance, for Federal purposes, of a properly balanced force of all arms, it would be natural to expect the States to begrudge the expenditure of large sums of money on the cavalry arm. And such is indeed the case. It would seem then that to protect its own interests, the Federal Government should not leave it to the States to decide on the apportionment of Federal funds between the several arms, but must itself undertake this distribution.

In thus regulating the distribution of funds, the Federal Government should have these two ends in view:

(*a*) The proportion of the several arms should be tactically correct.

(*b*) The several arms should be maintained in a uniform degree of efficiency.

Legislation will be necessary to place the Cavalry of the Organized Militia in a satisfactory condition as regards strength and training. Such legislation should provide for the maintenance of a limited number of horses pertaining to the Organized Militia and the expense of such maintenance should be met out of funds appropriated under section 1661, Revised Statutes.

Under the present law a number of organizations own horses, some even having enough to mount the entire command at one time. A majority of the militia cavalry organizations either own but very few horses or none at all. The result is that when required to turn out they have to gather such available mounts as can be found in the vicinity, many of them wholly unfit for service and of a type unsuited for military work. The results are not satisfactory.

A number of militia cavalry organizations had but little or no mounted work during the year. In one case a squadron went into camp for 10 days without a single horse. Such troops are cavalry in name only and their being carried as cavalry in the reports gives an erroneous impression of the strength of the cavalry arm.

ENGINEERS.

There are now in the Organized Militia of the several States 2 bands, 4 battalion headquarters, and 21 pioneer companies, the same as at date of last report. Including a number of engineer officers in States which have no troops, but excluding the Oklahoma company since mustered out, the strength of the engineers according to annual returns of December 31, 1912, was 121 officers and 1,122 enlisted

men. One company was mustered out in Oklahoma May 13, 1913, and 1 new company was mustered in at Chicago, Ill., July 30, 1912.

The present distribution, according to the proposed 12 tactical divisions, is unbalanced, 7 out of the 12 divisions having no Engineer troops, and of the 5 which have any engineers, 2 have only 1 company each, and 1 has but 2 companies. On the other hand, the Sixth Division (New York) has a surplus of 9 companies and the Eleventh Division (Ohio and Michigan) a surplus of 2 companies.

During the year two officers of the Corps of Engineers of the Army were detailed for duty with the Organized Militia, one in the Division of Militia Affairs, and one as inspector-instructor of the Engineer troops in the States of New York, Pennsylvania, and Ohio.

It is believed that during the coming year the complement of engineers in the Organized Militia will be increased by approximately 10 companies.

All of the companies organized have practically complete technical outfits for militia pioneers. The New York Engineers have one complete division of advance guard, ponton equipage, some reserve ponton equipage, and a lithographic outfit.

Considering the engineer organizations required for the 12 proposed divisions of militia, the deficiency is 15 pioneer companies and 8 battalion headquarters. To these numbers should be added the 4 ponton battalions for the auxiliary divisions of the probable 4 field armies and 4 battalions railway troops and at least 4 battalions as line of communication and depot troops. The total deficiency in engineers required for operation of the 12 proposed militia divisions is therefore 20 battalion headquarters and 51 companies.

SIGNAL TROOPS.

Field Service Regulations of 1910 prescribe for each division one battalion of signal troops composed of 2 field companies. The present scheme contemplates 12 Militia divisions. In order, then, that the Militia Signal Corps organizations be in the correct proportion there should be 24 companies, or 2 to each division. These companies should also be the same as the field companies of Signal Corps troops of the Regular Army.

Four types of field companies are authorized for the Organized Militia:

Type A, containing 4 wire sections and 2 radio sections; type B, containing 4 wire sections; type C, containing 2 wire sections; type D, containing 2 wire sections and 2 radio sections.

Type A is the same as a Regular Army field company. There are at present in the Organized Militia 11 type A companies, 3 type B companies, 3 type C companies, 5 type D companies. Total, 22 companies.

One-half of the above are of the Regular Army type, and 2 companies are lacking to make the number necessary to conform to the required proportion for the 12 divisions.

These 22 companies are not properly distributed in the several divisions, three divisions having none, and several having more than the required number. An effort will be made to recruit all companies to the A type and to organize the 2 now lacking.

SANITARY TROOPS.

While there has been considerable improvement in the efficiency of the sanitary troops of the Organized Militia during the past year, this improvement has not been as great or as general as is desired, and as is essential to real efficiency. The principal causes of the present unsatisfactory condition are lack of uniform organization and instruction, of proper equipment and suitable instructors, and in some instances a lack of proper support and encouragement on the part of the State authorities, and to some extent inefficient personnel in the medical department itself of the Organized Militia.

COAST ARTILLERY.

The War Department provides a uniform system of instruction for the Coast Artillery Militia, which applies to the indoor or armory period of instruction as well as to the exercises held each year in the several coast defenses. The value of a definite standard method of instruction has been demonstrated by the steady and commendable progress made by the troops in acquiring knowledge of their matériel and duties, and by their ability to serve their guns with safety and fire with a fair degree of accuracy.

The development of Militia Coast Artillery is most important, serving as it will to fill up the complement of men necessary in the coast defenses in case of war. Under a proper system and with officers interested in their work, instruction is possible throughout the year, either in armories or in the batteries themselves, generally within reach.

This branch of the Militia has a far better opportunity than other arms of the Militia to become highly efficient, and every effort should be made to make it so. To this end every opportunity should be made use of to take the men to the fortifications for practical work, and arrangement should be made looking to this by those of the regular establishment, and the Militia assigned to their works for instruction.

RESERVES.

The subject of reserves is one of great national importance. Militia organizations are maintained during peace at the minimum strength consistent with training. When war comes it will be necessary to increase these organizations nearly to three times the peace strength. Unless some system is adopted through which trained men can be assured, such increase must come from the untrained civilians constituting the mass of the population; and it is evident that organizations increased in this manner would be rendered ineffective for immediate use.

In view of these facts, there should be organized in each State a militia-reserve system to consist of men who have served for a period in the Army, Navy, Marine Corps, or Organized Militia. It is believed that any legislation enacted in connection with the Organized Militia should contain some provision on the subject of reserves. As such reservists are needed principally for Federal use, the small cost of maintaining them should be paid almost exclusively by the

Federal Government. There are many men who for one cause or another are compelled to sever their relations with the Organized Militia but who would gladly enroll in a reserve for national purposes. Legislation creating such a reserve for national defense, but exempting the members from liability to strike or riot duty, would, I believe, be very popular with ex-guardsmen generally.

UNITED STATES PROPERTY ISSUED TO THE ORGANIZED MILITIA.

Military stores and supplies purchased by the United States and issued to the Organized Militia are not, in some instances, properly cared for or adequately protected against theft and damage from avoidable causes. The conditions, however, have improved during the past year to a greater extent, it is believed, than in any prior period of like duration. The improvement has resulted from active and persistent efforts of the War Department, commenced in 1911, to induce the authorities of the Organized Militia to account or pay for property shortage and to provide proper facilities for the care and protection of the supplies on hand.

The total value of property shortages in 19 of the States and the District of Columbia, determined to date and acknowledged in most cases by the Militia, amounts to over $800,000. When the inventories of the property in the remaining States shall have been compiled and compared with the property returns, the total value of stores which have been lost and which can not be satisfactorily accounted for will be far in excess of the amount just stated. A portion of this shortgage accrued before or about the time of the Spanish-American war, but the greater part has accumulated since the enactment of the Dick law in 1903.

The value of property lost or destroyed through failure to exercise proper care, and charged during the fiscal year 1913 to the allotments to the several States under section 1661, Revised Statutes, was $29,633.19. This amount is the value of only the stores reported by the States in survey proceedings and does not by any means include all such losses.

The Organized Militia is not supplied with uniforms and equipment in quantity or kind sufficient for its needs should all or a large part thereof be called into the service of the United States. There seems to be a tendency in some of the States to provide only the supplies needed by the troops for the short period of the annual field exercises. Other States look to the equipment of their troops for State purposes only. The rights of the Federal Government in this particular appear to have been lost sight of by some States. The most serious deficiencies are lack of shoes, stockings, service uniforms, transportation, and equipment for sanitary troops. The lack of equipment is in a measure also due to the fact that large quantities of property have been lost or rendered unserviceable through neglect or carelessness. The comparatively large expenditure of funds for the pay and transportation of officers of high grade without commands or duties commensurate with their rank and the great expense connected with the participation of small selected rifle teams in State, interstate, and national competition have contributed in no small degree to the want of proper equipment. The War Department is inaugurating a

system of rigid scrutiny and supervision of all expenditures of Federal funds for the benefit of the Militia with the view to correcting the defects referred to.

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UNITED STATES MILITARY ACADEMY.

Two examinations were held for admission to the academy during the past year; one, the regular spring examination, and one a special examination for the purpose of filling up, if possible, the existing vacancies. It is much to be regretted that this splendid institution is not kept full, and it is earnestly hoped that the measures presented to Congress to this end will be enacted into law. I refer especially to the measure which provides for the appointment of the first 30 successful alternates. If this is enacted into law it will enable us to keep the academy full. The graduates are needed in the service, and the institution can be worked to its full capacity with practically no increase in overhead charges. Even if the number of graduates should be in excess of the needs of the Army, they will be a valuable asset to the country in time of need.

It has been decided to amplify somewhat the procedure for admission to the Academy by admitting, subject to physical examination only, young men of suitable age and character who have passed without condition the entrance examination to the universities, colleges, and technical schools of that class whose entrance examinations equal the requirements of West Point. This will enable a great many young men who are preparing for college, who are anxious to go to West Point but are somewhat uncertain as to securing an appointment, to go on and make their preparation for college, knowing that if they are successful in passing the college examinations they can, if successful in the matter of securing an appointment, enter the Academy. Under the present system many young men who are fitting for college do not feel that they can afford to drop out and go to a preparatory school for the purpose of reviewing elementary work which had been done years before, thus interfering with their preparation for college and involving great additional expense, all perhaps with an uncertainty as to appointment. Under the modified system young men who are not preparing for college will go on and prepare for West Point as at present, but young men who are in college, and young men who are preparing for college and hope to go to West Point, can go on with their college work knowing that if they have passed successfully the examinations of the colleges of the first class and secure an appointment they can enter West Point subject only to physical examination. This is going to bring to the Academy, I believe, a most desirable class of men, certainly men with a far broader educational foundation than those who enter the Academy through the special preparatory schools, whose curriculum is generally limited and whose efforts are concentrated on the few studies necessary to pass the academic board. It seems desirable that a cadet should have had as broad an educational foundation as possible before going to West Point. This addition to the present system, while not interfering with those who prefer to follow the old method, will give us, I believe, a large number of young men who will go to the Academy better prepared to take up

not only the academic work but the work and duties which fall to an officer after graduation, through having had a better all-around education before going to the Academy.

THE ARMY SERVICE SCHOOLS.

The work at the Army Service Schools has maintained its former high standard. I believe the schools are becoming more valuable every year. It is difficult for one who has not seen the effect of these schools upon the officers who have studied there to appreciate their tremendous value to the service. They are teaching a sound doctrine and our officers are commencing to speak a common language in a military sense and to understand better the interdependence of the different arms. An efficient Army is now the objective, and the proper proportion of the various arms striven for instead of the disproportionate development of any one arm.

The garrison school course needs thorough revision and grading for officers of different qualifications. This is now being done.

SHORTAGE OF OFFICERS.

There exists at the present time a great shortage of officers and the War Department is unable to meet the demands made upon it by the militia, and it is only with the greatest difficulty that suitable officers are secured for duty at the various colleges and schools where military instruction is given under officers of the Army.

To-day we could make use of to great advantage 100 additional officers with the militia. As the militia is now a part of the first line and one of our main dependencies in case of war, steps should be taken to provide, with the least practicable delay, a sufficient number of officers to meet its requirements.

The trained officer is one of the most valuable military assets this country can have, dependent as it is upon hastily raised forces, and it is a false economy to reduce expenses by reducing the number of such officers.

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RIFLE SHOOTING IN THE PUBLIC SCHOOLS.

Measures, which it is trusted will be enacted into law, have been presented to Congress, providing for a certain amount of Government support of rifle shooting in the public schools. The use of the rifle is rapidly passing out of our population, and it is most important that our youth should be skilled in its use, as skilled use of the rifle is one of the most important features of a soldier's training, and in case of war the proper instruction of our troops would be greatly facilitated if recruits have been trained in the use of this arm. There are few ways in which better returns can be obtained for a moderate expenditure of public funds than in encouraging the training of our youth in the use of the rifle.

OFFICERS WITH FOREIGN ARMIES.

Arrangements have been made during the past year for the regular assignment of officers to regiments of the different arms of the French and German armies. It is believed that this will result in great benefit

to our service, in that these officers will be given an opportunity to see at first hand what is being done in the best European military establishments and will bring to our own service the results of their observations. The officers selected for this duty will be, as far as practicable, those who have had special preparation through work in our own service schools and the War College, and it is believed that this work, plus their experience abroad, will make them most valuable instructors and staff officers in our own Army.

MILITARY EDUCATION.

INSTRUCTION AT COLLEGES AND SCHOOLS AT WHICH REGULAR ARMY OFFICERS ARE DETAILED.

Under section 1225, Revised Statutes, and amendments thereto, officers of the Regular Army are detailed as military instructors to certain schools, colleges, etc., that fulfill specified requirements as to number of students attending and amount of instruction given in military subjects.

Under the Morrill Act of July 2, 1862, certain land and money were donated—

to the endowment, support, and maintenance of at least one college (in each State) where the leading object shall be, without excluding other scientific and classical studies, and *including military tactics*, to teach such branches of learning as are related to agriculture and the mechanic arts, etc.

Under the present law there is no specified standard of military instruction required, and no penalty attached to insufficient or improper military instruction that endangers the receipt of the annual funds appropriated. Unless the following provision of the act of August 30, 1890, could be construed as such, viz:

If the Secretary of the Interior shall withhold a certificate from any State or Territory (as to whether such State or Territory is entitled to receive its share of the appropriation for colleges) of its appropriation, the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separate in the Treasury until the close of the next Congress, in order that the State or Territory may, if it should so desire, appeal to Congress from the determination of the Secretary of the Interior.

If the next Congress shall not direct such sum to be paid, it shall be covered into the Treasury.

And the Secretary of the Interior is hereby charged with the proper administration of this law.

The Secretary of the Interior has not under him the necessary trained military personnel to determine, so far as the proper military instruction is concerned, whether or not the intent of the provisions of the Morrill Act regarding "military tactics" is properly enforced, and does not attempt to do so.

The War Department does inspect the several colleges to which Army officers are detailed, but has no remedy for the enforcement of the proper amount of military study other than the withdrawal of said officers, in certain cases, the result being that in some colleges the minimum amount possible is set aside for the maintenance of the military department.

To cite an example of the present apportionment of funds appropriated—and this example is only one of a number—the Rhode Island State College received last year a total of $82,500 from the sale of lands under the various acts for the purpose of maintenance.

Of this amount, not one cent was set aside for the maintenance of the military department, although a total of $200 was given said department from the college maintenance fund.

It is believed that the Secretary of the Interior should designate the Secretary of War as the proper person to specify the kind and amount of military instruction, and to determine when same has been complied with.

In conformity with the policy of the War Department relative to coordinating the work of the military departments of the educational institutions to which officers of the Army are detailed, bulletins will be issued from time to time.

The purpose of these bulletins will be to indicate the general policy as to this instruction and to endeavor to increase the efficiency thereof by helpful suggestions based upon successful methods observed by the General Staff committee having supervision of these matters, and to publish information of general interest to the military departments of educational institutions as occasion may arise.

It is not intended that these bulletins shall be considered in the nature of orders, but that they shall serve as a medium for the exchange of ideas and for bringing the officers on duty at various institutions into closer touch with each other.

At the last annual inspection it was generally found that sufficient progress had not been made in practical instruction; that too much time was spent in close order and ceremonies at the expense of good theoretical instruction and practical fieldwork.

Few institutions had reached a satisfactory degree of efficiency in fieldwork, and a number of institutions which could have participated in practice marches or target practice had not done so. The theoretical instruction fell far below what it should have been, not from lack of conscientious effort, but from nonuse of the applicatory method of teaching.

Close order drills and ceremonies have a disciplinary training and effect not to be obtained in any other manner, but proficiency in such drills should not be considered or treated as the final result to be accomplished in a season's training, as sometimes appears to be the case.

In the lecture course, each one of our wars should be taken up and a true history of our past military operations and policies imparted to the student. Upton's Military Policy should be used to prepare these lectures and they should be informal talks rather than prepared lectures. These lectures and talks will embody a brief résumé of the main features of the military history of the United States, our present military system and a thorough and careful exposition of the approved military policy. It is of the utmost importance that graduates of these institutions, who are men of education and intelligence, shall take with them to their communities sound and correct ideas on these important subjects, vital to the establishment of a sound military policy rather than mere mechanical instruction.

Students should be encouraged to study our military policy and our Army in order to learn our needs. Some institutions, notably the Virginia Military Institute, have had instruction along these lines for some time.

There has been a remarkable increase of interest in military instruction during the past year at colleges and schools where such instruc-

tion is maintained, and a disposition has everywhere been shown to come into closer relations and better understanding with the War Department with the view to adopting some general line of policy as to the scope and character of the work.

This movement is a most encouraging sign, as these schools and colleges have a total enrollment of 29,401 and include the agricultural and mechanical colleges, some of the State universities and many private military schools, at all of which military instruction is given. At some of the schools the course in military training varies from indifferent to excellent, and it is believed that great good will result from the establishment of closer relations with the War Department and the gradual adoption of a course of military instruction which will be more in harmony throughout the whole class of educational institutions having such instruction. There has been a general lack of sound instruction in military history and military policy. Perhaps too much time has been given to the purely mechanical part of the instruction and too little to impressing upon the students true ideas of our military history and an understanding of the military needs of the country, such as proper organization and disposition of the Army, building up of reserves, and enlistments adapted to the requirements of different types of men.

The students' military instruction camps, held at Monterey, Cal., and Gettysburg, Pa., were very successful. Ninety universities, colleges, and high schools were represented. The authorities of the institutions represented have, practically without exception, expressed their thorough approval of the results accomplished, as have the students and parents, and everything points to very much larger camps for the next year.

The advantages accruing from these camps may be summarized as follows:

The physical benefits derived from the active, healthful, outdoor life of a camp.

The acquiring of habits of discipline, obedience, order, self-control and command, with their resultant gain in business efficiency.

The training imparted to the young men in military maneuvers, tactics, care of troops, camp sanitation, and rifle practice, resulting in their better preparation to discharge their military duty to their country should it ever have to call upon them in time of need, thereby saving the great waste in valuable lives and money which has always occurred at the beginning of previous wars due to the ignorance in such matters of the newly created officers and men.

The benefit to the country in the fostering of a patriotic spirit, without which a nation soon loses its virility and falls into decay; also the dissemination among the citizens of the country by the return of the students who attended camp of a more thorough knowledge of military policy, the true military history of our country, and its military needs, all necessary to the complete education of a well-equipped citizen in order that he may himself form just and true opinions on military topics.

I attach hereto, as appendices 10 to 13, a letter from the President of the United States concerning these camps, also one from the president of Lehigh University, whom the students who attended the Gettysburg camp during the past summer, elected as president of the

Students' National Reserve Corps; also a list of college presidents forming a board of advisers and a copy of a constitution adopted by the students of this year's camps.

The instruction given at these camps has been of the greatest value to the young men participating, and will tend not only to give them some ideas of our military situation and policy, but it will also tend to establish nuclei of information in the student bodies of the various universities represented.

Students were required to pay for their transportation, their subsistence, and their clothing, the two latter items amounting to an average of $15.

In view of the great success of these two camps, the War Department has decided to repeat them during the ensuing year.

To accommodate the much larger number of students expected and to reduce the amount they will have to pay for transportation, four camps will be established: One at Burlington, Vt., for the northeast section of the country; one at Monterey, Cal., for the western section; one in the middle West, and one in the southeast section, the exact locations not having as yet been decided upon.

The great interest taken in them by the presidents of the leading universities, the enthusiasm of the students and parents, and the general approval of the public at large, all point to a full attendance next year, and I venture to predict their continued success and prosperity. I consider them of great value and full of possibilities in the direction of implanting sound ideas of national preparedness in our college men, and, through them, the people of the country.

CIVIL WAR VETERANS' ENCAMPMENT AT GETTYSBURG.

At this camp about 55,000 veterans of the Civil War were assembled and cared for for eight days in a manner to reflect great credit upon the officers in charge of the encampment. The sanitary conditions were excellent; the food was ample and satisfactory in every way. In short, this very large collection of aged and infirm men passed through the encampment with very little sickness. The absence of sickness and disability was remarkable.

THE WORK OF THE ARMY IN NATIONAL DISASTERS.

The Army was called upon during the past year again to assume the direction of relief work incident to floods and cyclones in Ohio and neighboring States, and throughout the length of the Mississippi Valley. The work was conducted most efficiently, and a great number of lives and an immense amount of property saved. So quietly and efficiently was the work done the people of the country hardly realized its tremendous extent, involving as it did, the feeding of many thousands of people a day for some time. (Appendix No. 14.)

The Army also rendered excellent service in connection with forest fires in various portions of the country. In short, it has again, in many fields, shown its capacity to take hold of great situations and handle them efficiently and promptly and illustrated, as it has time and again of recent years, that it has been one of the greatest life-saving forces of the Government, always ready and always efficient.

FIELD SERVICE OF TROOPS.

Throughout the year, as during the preceding year, it has been necessary to maintain a strong patrol on the southern border for the purpose of enforcing the neutrality laws, aiding in the maintenance of customs regulations, and insuring the safety of people living immediately on the border. The work of the troops has been performed in an admirable manner, and one which has indicated a high degree of discipline.

The division assembled at Texas City in February of last year has been maintained in excellent condition, and the camp sanitation has been such as to reflect great credit upon the division commander and the officers of the Medical Corps having immediate charge of the work.

There have been some minor military operations in the Philippines against hostile Moros, incident to undertaking the disarmament of these people and placing them upon a footing, in all that pertains to the ownership and carrying of arms, similar to that obtaining in the Filipino portion of the islands. The work of the troops has been very effectively performed under conditions of a very trying character.

The headquarters and two battalions of infantry sent to China last year have remained on the line of communications between Tientsin and Peking under a previous international agreement.

Communications from the commanding general, Philippine Department, foreshadow recommendations to withdraw American troops from the southern islands and handle the situation there with scouts and constabulary.

CONCLUSIONS.

In conclusion I earnestly invite your attention to the following recommendations which are embodied in this and preceding reports. They are of vital importance in establishing a condition of reasonable preparedness for possible emergency.

First. The establishment of a reserve of trained men for the Regular Army sufficient to bring it immediately to full statutory strength and to replace the losses of the first three months of war.

Second. The prompt provision of the remaining 42 per cent of our very modest project for Field Artillery Guns as yet unprovided for and the necessary ammunition for those now made or under manufacture. The present shortage in ammunition constitutes a grave source of danger. Ammunition of this type can not be bought in case an emergency should arise requiring its use without great delay; no nation carries it for sale. It can not be manufactured in this country no matter what efforts we make without such delay as would probably render it unavailable during the emergency. The condition is a very grave one, greatly diminishing our chance of success in case of war, and should be remedied with the least possible delay. The importance of promptly securing this ammunition can not be too strongly stated.

Third. The creation of the necessary organizations to give three complete tactical Infantry divisions within the continental limits of the United States.

Fourth. The enactment of such personnel legislation as will eliminate effectively the unfit and stimulate the efficient officer to continued efforts through establishing a condition under which progress in rank

and command will have a close and dependent relationship upon capacity, fitness, and accomplishment. Such is not the condition now.

The first and second of the above recommendations deal with conditions which should be corrected with the least possible delay, as their continuance means disaster in case of war. Their correction will take time, and measures looking thereto should be pushed as rapidly as possible.

The third is necessary to complete one field army of regular troops within the continental limits of the United States. It means a field army of about 70,000 mobile troops in a population of more than 90,000,000.

The fourth is essential if we are to attain the highest degree of efficiency.

Very respectfully,

LEONARD WOOD,
Major General, Chief of Staff.

The SECRETARY OF WAR.

REPORT OF THE ADJUTANT GENERAL.

WAR DEPARTMENT,
THE ADJUTANT GENERAL'S OFFICE,
October 18, 1913.

To the honorable the SECRETARY OF WAR:

This report relates generally to the fiscal year ended June 30, 1913, but where extension beyond the fiscal year tends to continuity and completeness of data such extension has been made. The report relates to the organization and operations of the Army, as shown by reports and correspondence of record in this office. It also relates to the business of the office as a bureau of the War Department.

While the Philippine Scouts are by law included in the strength of the Army, the military statistics hereafter presented relate to the Regular Army only unless it is specifically indicated in any case that the Philippine Scouts are included.

AUTHORIZED STRENGTH OF THE ARMY.

The authorized strength of the entire military establishment on July 1, 1912, not including the Hospital Corps, was 4,812 officers and 81,409 enlisted men in the Regular Army and 180 officers and 5,732 enlisted men in the Philippine Scouts, a total of 4,992 officers and 87,141 enlisted men. The authorized strength on July 1, 1913, not including the Hospital Corps or the enlisted strength of the Quartermaster Corps, with the exception of 403 quartermaster sergeants, was 4,763 officers and 84,810 enlisted men in the Regular Army and 180 officers and 5,732 enlisted men in the Philippine Scouts, a total of 4,943 officers and 90,542 enlisted men.

It will be seen from the foregoing statement that there was a net decrease of 49 officers and a net increase of 3,401 enlisted men in the authorized strength of the Regular Army and that there was no change in the authorized strength of the Philippine Scouts during the year covered by this report.

The decrease in the number of officers of the Regular Army was the result of an increase of 1 officer in the Judge Advocate General's Department under the provisions of the act of Congress approved March 2, 1913 (37 Stat. L., 708); an increase of 12 officers in the Corps of Engineers under the provisions of the act of Congress approved February 27, 1911 (36 Stat. L., 957); a decrease of 40 officers in the Quartermaster Corps under the provisions of the act of Congress approved August 24, 1912 (37 Stat. L., 952); a decrease of 11 in the number of officers of the Medical Reserve Corps assigned to active duty under the provisions of the act of Congress approved April 23, 1908 (35 Stat. L., 66); and a decrease of 11 in the number of additional officers authorized by the act of Congress approved March 3, 1911 (36 Stat. L., 1058).

The increase of 3,401 in the authorized enlisted strength resulted from an increase in strength of certain organizations stationed outside the continental limits of the United States, directed in General Orders, No. 19, War Department, March 3, 1913, together with some minor changes made from time to time pursuant to War Department general orders.

The authorized strength of the military establishment on June 30, 1913, by branches of service, is shown in the following table:

Branches of service.	Officers.	Enlisted men.	Total.
General officers	21	.....	21
Adjutant General's Department	23	.....	23
Inspector General's Department	17	.....	17
Judge Advocate General's Department	13	.....	13
Quartermaster Corps	183	403	586
Medical Department	608	.....	608
Corps of Engineers	225	1,942	2,167
Ordnance Department	85	735	820
Signal Corps	46	1,212	1,258
Bureau of Insular Affairs	3	.....	3
Cavalry	825	14,144	14,969
Field Artillery	269	5,457	5,726
Coast Artillery Corps	765	18,607	19,372
Infantry	1,641	33,107	34,748
Porto Rico Regiment of Infantry	32	591	623
United States Military Academy detachments	7	630	637
Recruiting parties, recruit depots, and unassigned recruits	.....	7,000	7,000
United States Military Prison guards	.....	320	320
Service-school detachments	.....	587	587
Indian scouts	.....	75	75
Total Regular Army	4,763	84,810	89,573
Philippine Scouts	180	5,732	5,912
Aggregate	4,943	90,542	95,485

The authorized enlisted strength does not include the Hospital Corps (3,500 men), which, under the act of Congress approved March 1, 1887 (24 Stat. L., 435), is not to be counted as a part of the enlisted strength of the Army.

The authorized enlisted strength shown in the foregoing table includes the 403 quartermaster sergeants of the Quartermaster Corps authorized by law. It does not include the enlisted strength (6,000 men) of the Quartermaster Corps, which, under the provisions of the act of Congress approved August 24, 1912 (37 Stat. L., 593), is "not to be counted as a part of the enlisted force provided by law."

The authorized number of officers shown in the preceding table includes 103 first lieutenants of the Medical Reserve Corps assigned to active duty under the provisions of the act of Congress approved April 23, 1908 (35 Stat. L., 66).

ACTUAL STRENGTH OF THE ARMY.

The actual strength of the entire military establishment on June 30, 1913, was 4,665 officers and 75,321 enlisted men in the Regular Army and 180 officers and 5,403 enlisted men in the Philippine Scouts, making a total of 4,845 officers and 80,724 enlisted men. The figures here given for the enlisted men of the Army do not include 3,419 enlisted men of the Hospital Corps (Medical Department) or 3,047 enlisted men of the Quartermaster Corps.

On June 30, 1912, the actual strength of the entire military establishment, not including the Hospital Corps, was 4,470 officers and 77,835 enlisted men in the Regular Army and 180 officers and 5,480 enlisted men in the Philippine Scouts, making a total of 4,650 officers and 83,315 enlisted men.

The following table shows the actual strength of the Army on June 30, 1913, by branches of service:

Branches of service.	Officers.	Enlisted men.	Total.
General officers	19	.....	19
Staff corps and departments	[1] 1,007	[2] 2,332	3,339
Engineers	201	1,649	1,850
Cavalry	788	13,685	14,473
Field Artillery	262	4,763	5,025
Coast Artillery Corps	748	16,628	17,376
Infantry	1,640	30,034	31,674
Miscellaneous	.....	6,230	6,230
Total Regular Army	[1] 4,665	[2] 75,321	79,986
Philippine Scouts	180	5,403	5,583
Aggregate	[1] 4,845	[2] 80,724	85,569

[1] Including 103 first lieutenants of the Medical Reserve Corps on active duty.
[2] Not including 3,419 enlisted men of the Hospital Corps and 3,047 enlisted men of the Quartermaster Corps.

COMPARISON OF AUTHORIZED AND ACTUAL STRENGTH.

The following table shows in convenient form the actual and the authorized strength of the military establishment on June 30, 1913, and June 30, 1912, not including the Hospital Corps, and including only quartermaster sergeants of the enlisted strength of the Quartermaster Corps, together with the increases and decreases during the year and the number of vacancies on each of those dates:

	Regular Army.			Philippine Scouts.			Total.		
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.
Authorized strength:									
June 30, 1913	4,763	84,810	89,573	180	5,732	5,912	4,943	90,542	95,485
June 30, 1912	4,812	81,409	86,221	180	5,732	5,912	4,992	87,141	92,133
Increase during year	[1] 49	3,401	3,352	.....	.....	.....	[1] 49	3,401	3,352
Actual strength:									
June 30, 1913	4,665	75,321	79,986	180	5,403	5,583	4,845	80,724	85,569
June 30, 1912	4,470	77,835	82,305	180	5,480	5,660	4,650	83,315	87,965
Decrease during year	[2] 195	2,514	2,319	.....	77	77	[2] 195	2,591	2,396
Vacancies:									
June 30, 1913	98	[3] 9,489	[3] 9,587	.....	329	329	98	[3] 9,818	[3] 9,916
June 30, 1912	342	3,574	3,916	.....	252	252	342	3,826	4,168

[1] Decrease. [2] Increase. [3] Includes allowance for unassigned recruits.

It will be seen from the foregoing table that while there was an increase in the authorized enlisted strength during the year ended June 30, 1913, there was a decrease in the actual enlisted strength. It appears from the foregoing table that on June 30, 1913, there were 9,489 vacancies in the authorized enlisted strength of the Regular Army. This, however, is not a correct figure, because the authorized enlisted strength of the Regular Army includes an allowance of not to exceed 4,770 enlisted men to provide for an accumulation of unassigned recruits in case all the organizations should be filled at any time to their authorized strength. None of this allowance for unassigned recruits should be considered in calculating the number of vacancies. Excluding from the calculation this allowance for unassigned recruits, it appears that there were approximately 4,700 vacancies in the authorized enlisted strength in addition to the 329 vacancies in the Philippine Scouts.

PHILIPPINE SCOUTS.

No change was made during the past fiscal year in the organization or the authorized strength of the Philippine Scouts. The total authorized strength of the Philippine Scouts is 180 officers and 5,732 enlisted men. They are organized into 12 battalions of 4 companies each and 4 independent companies, a total of 52 companies of enlisted natives of the Philippine Islands.

GEOGRAPHICAL DISTRIBUTION OF TROOPS.

The geographical distribution of the Army on June 30, 1913, is shown in the following table:

Geographical distribution.	Officers.	Enlisted men.	Total.
In the United States	3,680	59,549	63,229
In Alaska	53	1,129	1,182
In the Philippines:			
Regular Army	446	11,209	11,655
Philippine Scouts	180	5,403	5,583
In China	41	1,211	1,252
In Porto Rico	33	646	679
In Hawaii	271	6,768	7,039
In the Isthmian Canal Zone	51	868	919
Troops en route and officers at other foreign stations	90	407	497
Total	4,845	87,190	92,035

The foregoing table includes 3,419 enlisted men of the Hospital Corps, distributed as follows: United States, 2,434; Alaska, 46; Philippines, 679; Porto Rico, 18; Hawaii, 144; Isthmian Canal Zone, 17; China, 36; en route, 45; and 3,047 enlisted men of the Quartermaster Corps, distributed as follows: United States, 2,489; Alaska, 31; Philippines, 233; Porto Rico, 43; Hawaii, 206; Isthmian Canal Zone, 16; China, 9; en route, 20. The table also includes 103 first lieutenants of the Medical Reserve Corps on active duty.

GEOGRAPHICAL DIVISIONS AND DEPARTMENTS.

The geographical divisions and departments established for purposes of military administration July 1, 1911, by General Orders, No. 64, War Department, 1911, were discontinued February 15, 1913.

By General Orders, No. 9, War Department, February 6, 1913, the territory of the United States and its possessions was reorganized into geographical commands, as follows:

The Eastern Department.—Embracing the New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Kentucky, Tennessee, Georgia, Florida, Alabama, Mississippi, the post of Fort Logan H. Roots, Ark., the Coast Artillery subdistricts of New Orleans and Galveston, the Panama Canal Zone, and the island of Porto Rico with the islands and keys adjacent thereto; headquarters at Governors Island, N. Y.

The Central Department.—Embracing the States of Ohio, Michigan, Indiana, Illinois, Wisconsin, Minnesota, North Dakota, South Dakota, Iowa, Missouri, Kansas, Nebraska, Wyoming (except that part included in the Yellowstone Park), Colorado, and the post of Fort Missoula, Mont.; headquarters at Chicago, Ill.

The Southern Department.—Embracing the States of Texas (except the Coast Artillery subdistrict of Galveston), Louisiana (except the Coast Artillery subdistrict of New Orleans), Arkansas (except the post of Fort Logan H. Roots), Oklahoma, New Mexico, and Arizona; headquarters at Fort Sam Houston, Tex.

The Western Department.—Embracing the States of Washington, Oregon, Idaho, Montana (except the post of Fort Missoula), so much of Wyoming as includes Yellowstone Park, California, Nevada, Utah, and Alaska; headquarters at San Francisco, Cal.

The Philippine Department.—Embracing all the islands of the Philippine Archipelago. This department is subdivided territorially into the district of Luzon, comprising the islands formerly included in the department of Luzon, and the district of Mindanao, comprising the islands formerly included in the department of Mindanao; headquarters at Manila, P. I.

The Hawaiian Department.—Embracing the Hawaiian Islands and their dependencies; headquarters at Honolulu, Oahu.

Provision was also made in the general order of February 6, 1913, before referred to, for the tactical organization of the troops of the mobile Army into divisions and brigades.

* * * * * * *

TROOPS SERVING OUTSIDE THE CONTINENTAL LIMITS OF THE UNITED STATES.

The exchange of regiments between the United States and the island possessions which was inaugurated when the Philippine Islands were first garrisoned by troops of the Regular Army was definitely abandoned in February, 1912. Since that date certain regiments and other organizations have been designated as permanent garrisons for the Philippines, and a tour of service there and in the Hawaiian Islands for all officers and for the noncommissioned officers of the staff corps has been established at three years, when they are replaced by individuals selected by roster from those serving in the United States. Enlisted men who do not desire to reenlist are brought home and replaced by recruits from the United States.

The troops serving outside the continental limits of the United States are as follows:

PHILIPPINE DEPARTMENT.

Seventh Cavalry, Eighth Cavalry.
Second Field Artillery.
Eleventh, Eighteenth, Twenty-third, Forty-second, Seventieth, Eighty-sixth, Ninetieth, Ninety-fifth, One hundred and thirty-eighth, and One hundred and forty-second Companies, Coast Artillery Corps.
Eighth Infantry, Thirteenth Infantry, Fifteenth Infantry (headquarters, band, First and Third Battalions detached in China), Twenty-fourth Infantry.
Two companies of Engineers.
Two companies Signal Corps.
One field hospital and ambulance company.

HAWAIIAN DEPARTMENT.

Fourth Cavalry.
First Field Artillery.
Tenth, Fifty-fifth, Sixty-eighth, Seventy-fifth, One hundred and fourth, One hundred and fifth, One hundred and forty-third, and One hundred and fifty-ninth Companies, Coast Artillery Corps.
First Infantry, Second Infantry, Twenty-fifth Infantry.
One company of Engineers.
One company Signal Corps.

CANAL ZONE.

Tenth Infantry.

The Thirtieth Infantry and two companies of the Signal Corps are stationed in Alaska.

The designation of permanent regiments for Philippine service at increased strength enabled the withdrawal of two regiments of Cavalry and four regiments of Infantry from that service and, although the total strength of the garrison there remained as formerly, resulted in a material reduction in the number of officers required for that service.

SECOND LIEUTENANTS APPOINTED.

During the year ended June 30, 1913, 296 second lieutenants were appointed to the Army. The following table shows the sources from which the appointments were made and the corps or arms of the service to which the appointees were assigned:

Source from which appointed.	Assigned to—					
	Engineers.	Cavalry.	Coast Artillery Corps.	Field Artillery.	Infantry.	Total.
United States Military Academy	15	41	37	13	81	187
Enlisted men, United States Army		4	1	1	9	15
Civil life	1	23	19	7	44	94
Total	16	68	57	21	134	296

Of the 94 appointed from civil life shown in the preceding table, 7 were graduates of the United States Naval Academy. Of the latter 1 was assigned to the Field Artillery arm and 6 to the Coast Artillery Corps. One civilian appointed to the Coast Artillery Corps and one civilian appointed to the Infantry arm declined the commissions.

Since June 30, 1913, the close of the fiscal year, 31 second lieutenants have been appointed, 4 in the Coast Artillery Corps and 27 in the

mobile Army. Four of these appointees are graduates of the United States Naval Academy, 13 are former enlisted men of the Army, and 14 are from civil life.

After these appointments were made there remained but 2 vacancies in the grade of second lieutenant in the line of the Army—both in the Coast Artillery Corps.

COMMISSIONED OFFICERS IN ACTIVE SERVICE.

On June 30, 1913, there were 4,665 commissioned officers on the active list of the Army. Of these, 1,227 (including 66 chaplains) were general officers or officers of the Staff Corps and departments, 788 belonged to the Cavalry, 262 to the Field Artillery, 748 to the Coast Artillery Corps, and 1,640 to the Infantry.

Of the 1,227 general and staff officers, 1,065 were present for duty, 47 on leave, 12 absent sick, and 103, including officers detailed on the General Staff, on detached duty. Of the 3,438 line officers, 2,617 were present for duty, 132 on leave, 41 absent sick, 647 on detached duty, and 1 in arrest.

From the foregoing it appears that 23.88 per cent of the line officers and 13.20 per cent of the general and staff officers were absent from their commands. At the close of the preceding fiscal year 27.01 per cent of the line officers and 10.10 per cent of the general and staff officers were so absent.

In addition to the officers on the active list, there were 100 retired officers under assignment to active duty on June 30, 1913, as is more fully shown elsewhere in this report.

ADDITIONAL OFFICERS.

The Army appropriation act approved March 3, 1911 (36 Stat. L., 1058), authorizes the promotion up to and including the grade of colonel, in the discretion of the President and subject to examination as prescribed by law, of line officers on the active list below the grade of colonel who have lost in lineal rank through the system of regimental promotion in force prior to October 1, 1890. It is provided that officers advanced to higher grades under the law cited shall be "additional officers" in those grades.

At the close of the fiscal year there had been 66 advancements in grade (41 to the grade of colonel and 25 to that of lieutenant colonel) under the act of March 3, 1911, before cited. The table following shows the grades to which, and the arms in which, those advancements were made.

Arm of service.	From lieutenant colonel to colonel.	From major to lieutenant colonel.	Total.
Cavalry	16	14	30
Field Artillery	2		2
Coast Artillery Corps	6	2	8
Infantry	17	9	26
Total	41	25	66

Of the 66 advancements shown in the foregoing table, 20 were advancements in the cases of 10 officers who were advanced to the grade of lieutenant colonel, and subsequently to that of colonel; 11 of the officers advanced were retired from active service prior to June 30, 1913; 2 died; 4 were promoted lineally and ceased to be "additional officers"; 1 was appointed a brigadier general, leaving 38 additional officers in service June 30, 1913. Of these, 13 were in the Cavalry arm, 2 in the Field Artillery arm, 6 in the Coast Artillery Corps, and 17 in the Infantry arm.

All of the officers promoted had already reached the grade of major. The 25 majors advanced to be additional lieutenant colonels left a like number of vacancies in the grade of major, which caused the promotion to the next higher grade of the same number of captains, first lieutenants, and second lieutenants. Of the 41 lieutenant colonels, 31 left vacancies in the grade of lieutenant colonel, and caused the promotion to the next higher grade of the same number of majors, captains, first lieutenants, and second lieutenants. The 10 additional lieutenant colonels who were advanced to be additional colonels did not make any vacancies in the grade of lieutenant colonel.

OFFICERS ON DETACHED SERVICE.

As in preceding years, a relatively large number of officers were absent from their commands on detached service. On June 30, 1912, there were 5.82 per cent of the general officers and officers of the staff corps and departments and 21.29 per cent of the line officers on detached service. On June 30, 1913, those percentages were 8.39 for general and staff officers and 18.81 for officers of the line. Officers detailed on the General Staff are included in those percentages.

* * * * * * *

RETIRED OFFICERS ON ACTIVE DUTY.

On June 30, 1913, there were 100 retired officers under assignment to active duty. The following table shows the grades and employment of those officers:

Duty.	Lieutenant general.	Brigadier general.	Colonel.	Lieutenant colonel.	Major.	Captain.	First lieutenant.	Second lieutenant.	Total.
At the Soldiers' Home	1				1	1			3
On recruiting service			1	6	8	17	6		38
With State militia			2	2	6	12			22
At Army Service Schools, Fort Leavenworth, Kans.				1					1
At Army War College			1						1
In charge of Indian prisoners					1				1
On college duty			1		10	13	5	1	30
Doorkeeper to President					1				1
Member of Cavalry Board		1							1
Military attaché			1		1				2
Total	1	1	6	9	28	43	11	1	100

Of the retired officers on duty, as shown in the foregoing table, 1 lieutenant general, 1 major, and 1 captain (all at the United States Soldiers' Home in this city) receive from the United States only the retired pay of their respective grades; 6 colonels and 9 lieutenant

colonels receive the pay and allowances that a retired major would receive under a like assignment; and 27 majors, 42 captains, 11 first lieutenants, and 1 second lieutenant receive the active pay and allowances of their respective grades.

OFFICERS EXAMINED FOR PROMOTION.

During the fiscal year 363 officers of the Army were examined, and 3 were reexamined, for promotion.

Of the 363 officers examined, 352 were found qualified, and 10 were found professionally disqualified; 6 of the latter were suspended from promotion, 3 will be suspended as vacancies occur after the close of the fiscal year, and 1 was honorably discharged under the provisions of the act of Congress approved April 23, 1908 (35 Stat. L., 66). One officer examined and found physically disqualified is to be retired when entitled to promotion.

Of the 3 officers who were reexamined, 1 was found qualified and 2 were found professionally disqualified and were honorably discharged.

One officer promoted during the fiscal year 1911, subject to examination, was examined during the past fiscal year and found qualified.

RETIRED OFFICERS.

On June 30, 1912, there were 1,017 commissioned officers on the retired list. During the fiscal year ended June 30, 1913, 73 officers were placed on the retired list, 59 of those on that list died and 1 was dismissed, leaving 1,030 officers of the Army on the retired list June 30, 1913. The following table shows the grades of the officers on the retired list and causes of retirement of those officers:

Grades.	By operation of law, 64 years of age (act of June 30, 1882).	After reaching 62 years of age (sec. 1244, R. S.).	On own application.		For disability.						
					In line of duty.						
			After over 40 years' service (act of June 30, 1882).	After over 30 years' service (sec. 1243, R. S.).	Section 1251, Revised Statutes.	With increased rank (acts of Oct. 1, 1890, Apr. 23, 1908, and Mar. 3, 1909).	With full rank of command when wounded (act of July 28, 1866).	Not in line of duty (sec. 1252, R. S.).	After failure to pass second professional examination (act of Mar. 3, 1909).	Under special acts of Congress.	Total.
Lieutenant general	2	.....	2	.....	.....	.....	.....	.....	.....	.....	4
Major general	14	.....	7	1	.....	.....	1	.....	.....	.....	23
Brigadier general	86	12	85	23	19	.....	2	.....	.....	2	229
Colonel	48	3	28	39	21	.....	1	.....	.....	.....	140
Lieutenant colonel	22	.....	6	33	20	17	.....	.....	.....	1	99
Major	10	.....	1	47	90	43	3	.....	3	2	199
Captain	6	.....	.....	14	117	45	.....	3	.....	5	190
First lieutenant	1	.....	.....	.....	69	22	.....	2	.....	1	95
Second lieutenant	.....	.....	.....	.....	21	.....	.....	1	.....	2	24
Chaplain:											
Lieutenant colonel	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Major	5	.....	.....	.....	11	.....	.....	.....	.....	.....	16
Captain	4	.....	.....	.....	3	.....	.....	.....	.....	.....	7
First lieutenant	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Total	201	15	129	157	372	127	7	6	3	13	1,030

Of the 7 officers who were retired under section 32 of the act of Congress approved July 28, 1866 (14 Stat. L., 337), on account of disability occasioned by wounds received in battle, with the full rank of the command held by them at the time such wounds were received, 2 were advanced three grades, 2 two grades, and 3 one grade. All of them, with the exception of the major general and 1 brigadier general, received a further advancement of one grade under the act of Congress approved April 23, 1904 (33 Stat. L., 264). In addition to these, 83 brigadier generals, 18 colonels, 41 lieutenant colonels, 73 majors, 20 captains, and 4 first lieutenants hold their present grades on the retired list through an advancement of one grade under the act of Congress approved April 23, 1904, making a total of 246 officers on the retired list June 30, 1913, who have been advanced one grade under that act because of service during the Civil War.

The table following shows, by grades, the number of officers of the Army retired from active service during the fiscal year ended June 30, 1913, and the causes of their retirement.

Grades.	By operation of law, 64 years of age (act of June 30, 1882).	After reaching 62 years of age (sec. 1244, R. S.).	On own application.		For disability.		Under special acts of Congress.	Total.
			After over 40 years' service (act of June 30, 1882).	After over 30 years' service (sec. 1243, R. S.).	Incident to the service (sec. 1251, R. S.).	Preventing promotion (acts of Oct. 1, 1890, and Apr. 23, 1908).		
Brigadier general	5		2		1			8
Colonel	7	3	5	3	3			21
Lieutenant colonel	2		1	6	2			11
Major	1			5	2	1	1	10
Captain					10	2		12
First lieutenant					5			5
Second lieutenant					2		1	3
Chaplain:								
Major	1							1
Captain					1			1
First lieutenant					1			1
Total	16	3	8	14	27	3	2	73

From the foregoing table it will be seen that 73 officers of the Army were placed on the retired list during the fiscal year ended June 30, 1913. During the preceding year 63 officers were placed on that list.

Commencing with cadets who entered the United States Military Academy subsequent to passage of the act of Congress approved August 24, 1912 (37 Stat. L., 594), service as cadets will not count for retirement of officers.

COMMISSIONED OFFICERS WHO HAD CIVIL WAR SERVICE.

The official records show that of the 4,665 commissioned officers on the active list of the Regular Army June 30, 1913, only one, Col. John L. Clem, Quartermaster Corps, served in the Army, Navy, or Marine Corps during the Civil War otherwise than as a cadet, prior to April 9, 1865.

There were 1,030 officers of the Army on the retired list June 30, 1913. Of these, 419 served in the Army, Navy, or Marine Corps otherwise than as cadets, prior to April 9, 1865. The following table shows, by grades, the number of officers on the retired list of the Army June 30, 1913, and the number of those officers that had Civil War service otherwise than as cadets, prior to April 9, 1865:

Grades.	Officers on the retired list June 30, 1913.		
	Total.	Civil War service.	No Civil War service.
Lieutenant general	4	4	.....
Major general	23	21	2
Brigadier general	229	195	34
Colonel	140	26	114
Lieutenant colonel	99	44	55
Major	199	82	117
Captain	190	29	161
First lieutenant	95	6	89
Second lieutenant	24	.....	24
Chaplain:			
Lieutenant colonel	3	3	.....
Major	16	9	7
Captain	7	.....	7
First lieutenant	1	.....	1
Total	1,030	419	611

It will be seen from the foregoing table that over 40 per cent of the officers of the Army on the retired list June 30, 1913, served as officers or enlisted men of the Army, Navy, or Marine Corps during the Civil War. On June 30, 1912, nearly 45 per cent of the officers of the Army on that list had Civil War service.

RETIRED ENLISTED MEN.

On July 1, 1912, there were 3,424 enlisted men on the retired list created by the provisions of the act of Congress approved February 14, 1885 (23 Stat. L., 305), modified by the acts of Congress approved September 30, 1890 (26 Stat. L., 504), March 2, 1907 (34 Stat. L., 1218), and August 24, 1912 (37 Stat. L., 575).

During the fiscal year 326 enlisted men were placed on the retired list and 161 of the men on that list died, leaving 3,589 enlisted men on the retired list at the close of the year, June 30, 1913.

PERSONS QUALIFIED TO HOLD VOLUNTEER COMMISSIONS.

Certificates were issued during the past fiscal year, under the provisions of section 23 of the act of Congress approved January 21, 1903 (32 Stat. L., 779), in the cases of 11 persons who were found upon examination by boards of officers convened for that purpose to be "specially qualified to hold commissions in any volunteer force which may hereafter be called for and organized under the authority of Congress, other than a force composed of Organized Militia." Of these, 1 was from Porto Rico, 1 from Alabama, 2 from Illinois, 1 from Tennessee, and 1 from Indiana, and 5 were noncommissioned officers of the Army.

From the date of the enactment of the law cited to June 30, 1913, only 79 certificates of qualification to hold commissions in the volunteer forces have been issued.

OFFICERS OF THE ARMY DETAILED AT CIVIL EDUCATIONAL INSTITUTIONS.

The laws and regulations governing the detail of officers to civil educational institutions as professors of military science and tactics are published in General Orders, No. 231, War Department, November 16, 1909. Under those laws and regulations 87 officers (54 on the active list and 33 on the retired list) were serving as professors of military science and tactics on June 30, 1912. On June 30, 1913, 86 officers (56 on the active list and 30 on the retired list) were thus on duty.

Under the provisions of the order before cited, the institutions, not exceeding 10 in any year, whose students have exhibited the greatest application and proficiency in military training and knowledge are to be designated as "distinguished institutions," and the President has authorized the announcement that an appointment as second lieutenant in the Regular Army will be awarded annually to an honor graduate of each of those institutions. The "distinguished institutions" for the past year, announced in Bulletin No. 20, War Department, June 12, 1913, are as follows, arranged alphabetically:

Agricultural and Mechanical College of Texas, College Station, Tex.
Culver Military Academy, Culver, Ind.
New Mexico Military Institute, Roswell, N. Mex.
Norwich University, Northfield, Vt.
Pennsylvania Military College, Chester, Pa.
St. John's Military Academy, Delafield, Wis.
St. John's School, Manlius, N. Y.
Shattuck School, Faribault, Minn.
The Citadel, Charleston, S. C.
Virginia Military Institute, Lexington, Va.

STRENGTH AND LOSSES OF THE ARMY.

The tables facing show (A) the strength of the Army of the United States June 30, 1912, and June 30, 1913, with losses from all causes between those dates; (B) the strength and losses from all causes in the Army in each month of the fiscal year; (C) the strength of the Army, by divisions and departments, at the end of each month of the fiscal year; and (D) the number of deaths in the Army during the fiscal year.

The losses in the Army during the year ended June 30, 1913, are summarized in the following statement:

REGULAR ARMY.

Officers:		
Killed in action or died of wounds, disease, etc	22	
Resigned or discharged	67	
Dismissed	6	
Retired	73	
		168
Enlisted men:		
Killed in action or died of wounds, disease, etc	398	
Discharged upon expiration of term of service	12,095	
Discharged for disability, by sentence of court-martial, or by order	8,063	
Deserted	4,451	
Retired	342	
		25,349
Aggregate		25,517

Wounded, 10 enlisted men.

PHILIPPINE SCOUTS.

Officers:		
Killed in action or died of wounds, disease, etc	2	
Resigned or discharged	8	
Dismissed	1	
		11
Enlisted men:		
Killed in action or died of wounds, disease, etc	40	
Discharged upon expiration of term of service	471	
Discharged for disability, by sentence of court-martial, or by order	85	
Deserted	3	
		599
Aggregate		610

Wounded, 2 officers and 34 enlisted men.

AGGREGATE.

Officers:		
Killed in action or died of wounds, disease, etc	24	
Resigned or discharged	75	
Dismissed	7	
Retired	73	
		179
Enlisted men:		
Killed in action or died of wounds, disease, etc	438	
Discharged upon expiration of term of service	12,566	
Discharged for disability, by sentence of court-martial, or by order	8,148	
Deserted	4,454	
Retired	342	
		25,948
Aggregate		26,127

Wounded, 2 officers and 44 enlisted men.

It appears from the foregoing table that 12,095 enlisted men of the Regular Army were discharged upon expiration of term of service during the fiscal year ended June 30, 1913. During the preceding fiscal year the number of discharges upon expiration of term of service was 21,187, and during the fiscal year 1911 it was 27,042. These numbers are, respectively, 11.3, 18.6, and 24.6 per cent of the whole number of enlisted men in service or of enlistment contracts in force during each of those years.

The losses from all causes other than expiration of term of service among enlisted men of the Regular Army during the fiscal year ended June 30, 1913, numbered 13,254. During the preceding fiscal year those losses were 11,252, and during the fiscal year 1911 they were 9,426. Those numbers are, respectively, 12.4, 9.9, and 8.6 per cent of the whole number of enlistment contracts in force during each of those years.

DESERTIONS.

As shown by the official returns, the number of desertions from the Army during the fiscal year ended June 30, 1913, aggregated 4,451, which is 4.15 per cent of the whole number of enlistment contracts in force during the year. The number of desertions during the past year is 1,040 greater than the number in 1912, and 1,947 greater than in 1911.

Of the cases of reported desertion during the year, the charge was declared erroneous in 273, 2 of the men were tried and acquitted of the charge, and 596 were tried and found guilty of the lesser offense of absence without leave, making a total of 871 cases improperly classed as desertions. If this number be deducted from the 4,451 desertions shown on the returns, there remain 3,580 cases, or 3.34 per cent, of actual desertions of enlisted men from the Army during the year. Because of the relatively small changes that would result, and because of the extended examination of records that would be necessary to ascertain the branches of service to which the 871 men erroneously reported as deserters belonged, and the periods during which their reported desertions occurred, those cases have not been excluded in calculating the percentages shown in the tables in this report relative to desertions.

A comparison of the percentages of desertions in each of the past 20 years is shown in the following table:

Fiscal years.	Percentage deserted.	Fiscal years.	Percentage deserted.
1913	4.15	1903	7.10
1912	3.00	1902	5.00
1911	2.28	1901	4.12
1910	3.66	1900	4.09
1909	4.97	1899	3.22
1908	4.59	1898	1.57
1907	5.62	1897	3.13
1906	7.43	1896	4.03
1905	6.79	1895	3.42
1904	6.61	1894	3.15

The following table shows the percentages of the whole number of desertions occurring in each of the several specified periods of service during the last three years:

Period of service in which desertion took place.	Percentage of the whole number of desertions.		
	Year ended June 30, 1913.	Year ended June 30, 1912.	Year ended June 30, 1911.
First three months of service	14	15	13
Second three months of service	15	16	8
Third three months of service	13	16	7
Fourth three months of service	11	11	10
First year of service	53	58	38
Second year of service	17	13	20
Third year of service	6	3	14
First enlistment	76	74	72
Second enlistment	16	19	18
Third enlistment	4	4	6
Fourth enlistment and subsequent enlistments	4	3	4
Total	100	100	100

It will be seen from the foregoing table that, as compared with the two preceding fiscal years, there was a decrease in the relative number of desertions during the first year of service, although there was an increase in the number during the second and third years of service sufficiently large to make the relative number of desertions greater during the first enlistment period.

The percentages of desertions by branches of service during the fiscal years 1908–1913 are shown in the following table:

Branches of service.	Percentages.					
	1913	1912	1911	1910	1909	1908
Field Artillery	6.11	4.07	2.93	4.72	7.03	5.74
Engineers	4.68	4.26	3.09	3.12	5.53	4.73
Cavalry	4.53	2.95	1.92	2.97	4.76	5.68
Hospital Corps	4.24	3.03	3.10	3.15	4.18	4.55
Coast Artillery Corps	4.19	3.38	2.42	4.30	5.50	3.93
Infantry	3.95	2.37	1.85	2.99	4.26	3.90
All others, including unassigned recruits	3.18	2.32	2.85	5.21	5.48	5.42
The Army	4.15	3.00	2.28	3.66	4.97	4.59

The foregoing statement shows an increase in the percentage of desertions during the past fiscal year over the year 1912 in every branch of the service except those included under the heading "all others, including unassigned recruits."

As in the preceding reports, the percentages of desertions hereinbefore shown are based on the whole number of enlisted men who were in service at any time during the year, and are not based on an average enlisted strength. All the losses during the year are included in the basic figures used, and those figures represent the whole number of enlisted men who might have become deserters or the whole number of enlistment contracts that might have been terminated by desertion at some time during the year. It is clearly improper to use as a basis for calculating the percentages of desertions a strength obtained by averaging the number of men in service at the end of each month of the year—a number that does not include the men who went out of service during the year, and even does not include the deserters themselves. If, however, the average enlisted strength were used as a basis, it would be found that the number of desertions from the enlisted force of the Army during the fiscal year ended June 30, 1913, was 5.48 per cent of the strength as against 4.43 per cent during the preceding fiscal year, 3.49 during the year 1911, and 4.64 during the year 1910.

An examination of the returns for the fiscal year ended June 30, 1913, was made for the purpose of ascertaining what organizations serving within the continental limits of the United States had the lowest and highest relative number of desertions. It should be borne in mind that in the following paragraphs showing the results of that examination the organizations that served a part or the whole of the year in Hawaii, Alaska, the Panama Canal Zone, and the Philippine Islands are not taken into consideration, because in those regions it is unusually difficult for a deserter to make good his escape from military control, and consequently desertions there are so few as to be negligible for the purposes of this report.

The regiments serving in the United States that had the lowest percentages of desertions during the year were the Tenth Cavalry, Ninth Cavalry, and Fifth Infantry, the cavalry regiments being colored, and the infantry regiment a white organization. The desertions from those regiments were 1.99, 2.43, and 2.56 per cent, respec-

tively, of the whole number of enlisted men in service, or of enlistment contracts in force, in those regiments. The Tenth Cavalry was one of the two regiments having the lowest percentage of desertions during the years 1910, 1911, and 1912, the percentages for those years, respectively, being 1.52, 0.78, and 1.52. During the past fiscal year the Sixth Field Artillery had the lowest percentage of desertions of any regiment of that arm serving in the United States, the desertions from that regiment being 5.31 per cent of the whole number of enlisted men serving in the regiment during the year.

The regiments with the highest percentages of desertions were the Twentieth Infantry, Twenty-first Infantry, Second Cavalry, and Fourth Field Artillery. The desertions from those organizations were 12.97, 12.60, 11.94, and 10.01 per cent, respectively.

In preceding annual reports it has been the practice to present a table showing the troops and companies from which no desertions were reported during the fiscal year, and a table showing the troops and companies that had the highest desertion ratios and their percentages of desertions. It is impracticable to present similar tables in this report for the fiscal year 1913, because of the difficulty involved and the amount of time that would be required in compiling the data from the new form of return, the use of which was begun July, 1912, the beginning of the fiscal year.

The tables given in preceding reports showing the posts in the United States that had the highest percentages and the lowest percentages of desertions are omitted from this report, because many of the troops in the United States, with the exception of the Coast Artillery Corps, have been absent from their permanent stations; therefore, the percentages obtained in this respect would be of little comparative value.

Of the white troops 4.33 per cent and of the colored troops 1.23 per cent were reported as deserters, as compared with 4.15 per cent for the whole Army. There was a decrease in the percentage of desertions among colored troops, as compared with the preceding year, of 0.03 per cent, and an increase among white troops of 1.26 per cent.

The following table shows for each month of the fiscal years 1911, 1912, and 1913 the percentages of the total number of desertions occurring during each of those years:

Months.	Fiscal years.			Months.	Fiscal years.		
	1913	1912	1911		1913	1912	1911
July	8.97	8.65	9.11	January	5.12	4.46	5.31
August	8.29	8.68	9.18	February	4.45	5.63	5.27
September	13.88	8.09	8.31	March	7.32	6.89	8.51
October	9.82	7.27	6.95	April	10.36	10.82	11.38
November	7.19	6.16	5.47	May	9.61	12.87	12.86
December	6.00	5.83	5.51	June	8.99	14.65	12.14
				Total	100.00	100.00	100.00

That nationality is not an important factor in considering the subject of desertions from the Army was again emphasized by the fact that during the past fiscal year the ratio of foreign-born deserters to

the whole number of deserters was approximately the same as the ratio of foreign-born men who have enlisted in the Army during the past three years to the total number of enlistments during that period.

Reports of return of deserters to military control during the fiscal year ended June 30, 1913, were received in 2,227 cases, not including 74 cases found to be not amenable to trial because of the statute of limitations. Of the 2,227 deserters returned to military control during the year, 813, or 36.5 per cent, surrendered themselves, and 1,414, or 63.5 per cent, were apprehended. Of the latter number, 608 were apprehended by the municipal police; 286 by sheriffs or other county officers; 231 by private detectives and detective agencies; 157 by the military authorities, including those identified by finger-print records in The Adjutant General's Office; 37 by naval authorities; 26 by United States marshals and their deputies; 25 by State detectives and other State officers; 13 by civilians (not civil officers); 12 by railroad police; 7 by United States customs officers; 6 by United States immigration officers, and 6 by officers in charge of penal institutions. Of the total number of deserters apprehended during the year, 43 per cent were apprehended by the municipal police, 20.2 per cent by county officers, 16.3 per cent by private detectives and detective agencies, and 11.1 per cent by the military authorities.

The disposition of the cases of the 2,227 men returned to military control during the year ended June 30, 1913, is shown in the following table:

Disposed of without trial:		
Charge removed as erroneous under paragraph 131, Army Regulations	273	
Restored to duty	16	
Discharged without honor	30	
Discharged on surgeon's certificate of disability	4	
Escaped from confinement while awaiting trial	38	
Died	2	
		363
Tried by court-martial:		
Acquitted	2	
Convicted of absence without leave; not sentenced to discharge	432	
Convicted of absence without leave; dishonorably discharged	114	
Convicted of absence without leave; sentence of dishonorable discharge mitigated by reviewing authority	44	
Convicted of absence without leave; sentence of dishonorable discharge disapproved by reviewing authority	6	
Convicted of desertion; sentence of dishonorable discharge mitigated by reviewing authority	49	
Convicted of desertion; sentence of dishonorable discharge disapproved by reviewing authority	5	
Convicted of desertion; not sentenced to discharge	1	
Convicted of desertion; dishonorably discharged and confined	1,141	
		1,794
Reports of results of trial not yet received		70
Total		2,227

It will be seen by the foregoing table that of the men tried by general courts-martial on the charge of desertion 539 were retained in service and 1,255 were dishonorably discharged. The lengths of the

sentences of confinement, as approved, in cases of men held to service are shown in the following table:

Less than one month	31
One to three months	206
Four to six months	242
Seven to twelve months	6
More than one year	5
	490
No sentence of confinement	49
Total	539

The length of sentences of confinement, as approved, in cases of men dishonorably discharged are shown in the following table:

Less than three months	11	
Three to six months	153	
Seven to twelve months	18	
Less than one year		182
One year		363
One year and a half		390
Two years		179
Two years and a half		81
Three years		25
Three years and a half		4
Four years and over		14
		1,238
No sentence of confinement		17
Total		1,255

Of the 539 cases in which the deserters were tried and retained in service, 119, or 22.1 per cent, have again deserted; 17 have been dishonorably discharged, and 7 have been discharged without honor, making a total of 143, or 26.5 per cent of the whole number who have deserted again or have had their services terminated other than honorably during the short time that has elapsed since their trials.

RESTORATION OF CITIZENSHIP AND REENLISTMENT OF DESERTERS.

The act of Congress approved August 22, 1912 (37 Stat. L., 356), in addition to a discontinuance of the loss of rights of citizenship because of desertion in time of peace, also authorized the President, where the offense was committed in time of peace, and where the exercise of such clemency will not be prejudicial to the public interests, to mitigate or remit the loss of rights of citizenship theretofore imposed by law upon deserters from the military service.

Pursuant to this legislation the rights of citizenship have been restored in the cases of 311 deserters from the Army, and adverse action was had in 14 cases, either because of conviction of a felony in addition to desertion, or because of adverse recommendation by the officer in charge of the prisoner on account of bad conduct while in confinement.

The legislation before cited also amended the act of Congress approved August 1, 1894, so that it should not be construed to preclude the reenlistment or muster into the Army of any person who

has deserted, or may hereafter desert, in time of peace, or of any soldier whose service during his last preceding term of enlistment was not honest and faithful, whenever the reenlistment or muster into the military service of such person shall, in view of the good conduct of such person or soldier subsequent to such desertion or service, be authorized by the Secretary of War.

The reenlistment of 21 men (16 of them deserters) whose last prior service was not honest and faithful was authorized, and application for permission to enlist was denied in 4 cases, either because, in addition to desertion, of conviction of other offenses or because conduct while in confinement had not been such as to warrant favorable consideration.

DISCHARGES OF ENLISTED MEN ORDERED BY THE WAR DEPARTMENT.

The following table shows the number of discharges of enlisted men ordered by the War Department during the fiscal year ended June 30, 1913, with the reasons for discharge:

On account of fraudulent enlistment	173
On account of desertion	25
On account of desertion and fraudulent enlistment	5
On account of imprisonment under sentence of civil court	143
On account of having become disqualified for service through own misconduct	63
In the interest of the United States	34
To enter the Soldiers' Home	8
By purchase, under General Orders, No. 90, War Department, 1911, General Orders, No. 39, War Department, 1912, and General Orders, No. 23, War Department, 1913	763
Under paragraph IX, General Orders, No. 90, War Department, 1911, paragraph II, General Orders, No. 39, War Department, 1912, and paragraph III, General Orders, No. 23, War Department, 1913	71
For other reasons, clause (e), section 2, paragraph 149, Army Regulations	6
On certificate of disability after admission to the Government Hospital for the Insane	75
Total	1,366

DISCHARGES ON SURGEON'S CERTIFICATE OF DISABILITY.

The method set forth in General Orders, No. 174, War Department, August 12, 1909, of discharging enlisted men for disability has been continued. During the year 960 enlisted men were recommended by post surgeons for discharge on certificate of disability and were ordered before boards of medical officers convened at recruit depots and general hospitals. Discharges were ordered on these certificates in 842 cases and on new certificates prepared by the boards in 90 cases. In 28 cases the soldiers were retained in service, the disability having been found insufficient to require discharge from service on that account. The numbers of soldiers retained in service in the three preceding years because the disabilities were insufficient to require discharge were as follows: 1912, 52; 1911, 67; and 1910, 29.

As stated in preceding annual reports, the chief beneficial effect of this method of discharging men on surgeon's certificate of dis-

ability lies in the fact that post surgeons, knowing that their certificates will be reviewed and the soldiers to whom the certificates relate reexamined by boards of expert medical examiners, exercise greater care in recommending the discharge of men for disability than they formerly did when no review of their work was possible.

It appears from the official returns that 1,056 enlisted men of the Regular Army, including the 75 enlisted men discharged after admission to the Government Hospital for the Insane, were discharged on surgeon's certificate of disability during the year. The difference between the number of discharges (932) on surgeon's certificate of disability after examination by boards of medical officers and the whole number of discharges (1,056) on surgeon's certificate of disability shown by the returns to have been made during the year is accounted for by the fact that some of the men shown by the returns to have been discharged on surgeon's certificate of disability were not ordered before boards of medical officers convened under General Orders, No. 174, of 1909. It is probable that many of the men discharged on surgeon's certificate of disability after admission to the Government Hospital for the Insane, and some of those discharged on account of pulmonary tuberculosis under the provisions of General Orders, No. 11, of 1912, were not ordered before boards of medical officers.

The number of discharges on surgeon's certificate of disability during the year ended June 30, 1913, was greater than the number during either of the years 1910, 1911, or 1912, the number of discharges during these years being 1,053, 780, and 1,046, respectively.

An examination of the records shows that 479 of the 1,056 discharges on surgeon's certificate of disability during the past fiscal year were based on disabilities that existed prior to enlistment. Of the 1,046 men discharged on surgeon's certificate of disability during the preceding year, 523 were discharged because of disabilities that existed prior to enlistment. During the year 1911, out of a total of 780 discharges of this class, 255 were discharged because of disabilities that existed prior to enlistment. These items, in terms of percentages, for the past four years are as follows: 1913, 45.3; 1912, 50; 1911, 32.7; 1910, 30.2.

DISCHARGES BY PURCHASE.

Section 4 of the act of Congress approved June 16, 1890 (26 Stat. L., 158), authorizes the President, in time of peace and "under such rules and upon such conditions as he shall prescribe," to permit any enlisted man to purchase his discharge from the Army. The regulations governing the subject are published in General Orders, No. 23, War Department, March 28, 1913.

In addition to the 763 discharges by purchase ordered by the War Department, as shown in a preceding section of this report, 2,557 discharges were ordered by commanding generals under the provisions of the general orders cited above, making a total of 3,320 discharges by purchase during the fiscal year ended June 30, 1913. The following table shows the number of applications for discharge by purchase, the disposition ordered by commanding generals, and

the action of the War Department on applications forwarded there for decision:

Where disposed of.	Number of applications for discharge by purchase.	Discharges ordered.	Applications disapproved.
Eastern Division	775	758	17
Central Division	521	517	4
Western Division	373	343	30
Philippines Division	17	10	7
Eastern Department	511	505	6
Central Department	62	56	6
Western Department	215	166	49
Southern Department	100	97	3
Philippine Department	33	26	7
Hawaiian Department	52	48	4
Second (Tactical) Division	95	31	64
Total	2,754	2,557	197
Applications forwarded to the War Department	769	763	6
Aggregate	3,523	3,320	203

The number of discharges by purchase (3,320) during this fiscal year is greater than the number (2,475) discharged in 1912, and also larger than the number (2,160) discharged in 1911.

The discharges by purchase during this year exceeded the number of enlistments made for the Army during any one month of the year.

THE ADJUTANT GENERAL'S DEPARTMENT.

On June 30, 1912, there were 23 officers in the Adjutant General's Department. Since that date 4 officers have been detailed to the department from the line of the Army, and 4 relieved from detail, leaving a total of 23 officers in the department at date of this report, of whom 18 are serving with various military commands, and 5 are on duty in The Adjutant General's Office.

THE MILITARY ACADEMY.

On August 31, 1913, there were under assignment to duty at the United States Military Academy 115 commissioned officers (including 7 professors, 2 acting professors, and 2 associate professors), 1 librarian, 1 master of the sword, 1 teacher of music, 4 civilian instructors in languages, and 3 civilians employed as instructors in fencing, broadsword exercise, and military gymnastics, a total of 125. This is a decrease of 12 since August 31, 1912, the date of the superintendent's report for that year.

On September 1, 1912, there were 558 cadets on the rolls, including 2 foreign cadets, 1 of whom was from Cuba and 1 from Nicaragua. Between September 1, 1912, and September 1, 1913, 33 cadets were discharged for deficiency in studies or in conduct; 2 were dismissed by sentence of court-martial; 1 was dropped from the rolls, appointed a second lieutenant of infantry, and retired under the act of Congress approved March 4, 1913 (37 Stat. L., 865); 12 resigned, and 93, in-

cluding 1 foreign cadet from Cuba, were graduated. In June, 1913, 167 cadets were admitted, including 1 foreign cadet from China, and 25 cadets were admitted in August, including 2 ex-cadets admitted without mental reexamination. Four ex-cadets were reinstated July 4, 1913, under authority of the act of Congress approved March 4, 1913 (37 Stat. L., 856), 1 of whom resigned July 5, 1913.

On September 1, 1913, there were 613 cadets on the rolls, including 2 foreign cadets, 1 of whom was from Nicaragua and 1 from China. Those cadets were divided among the four classes as follows: First class, 107; second class, 176; third class, 143; and fourth class, 187. Of this number, there is in each class 1 Filipino cadet, who is eligible upon graduation to appointment as an officer in the Philippine Scouts only.

The usual examination of candidates for admission to the Military Academy was held at various military posts April 29, 1913. An additional examination was held July 1, 1913, with a view to fill the 95 vacancies that existed after the regular examination. As a result of this additional examination, 20 of the 107 candidates designated were found qualified and 19 were admitted, the remaining candidate being an alternate for whom there was no vacancy. Including principals and alternates, 647 candidates were designated for the two examinations. Of that number, 150 failed to report, 14 failed to complete the examination, 16 declined appointment, 8 appointments were revoked by the War Department, and 249 were rejected upon mental or physical examination or upon both. There were no vacancies for 18 alternates and 5 candidates at large who qualified. The remaining 187 candidates were found qualified and were admitted to the Academy in June and August, 1913. Five candidates, 2 of whom had qualified as alternates and 3 of whom had qualified as candidates at large, for whom there were no vacancies, were also admitted, under new appointments, making the total number admitted, as a result of the two examinations, 192.

Information concerning the operation of the several academic departments, the rebuilding and enlarging of the Military Academy, the discipline of the Corps of Cadets, and other matters of interest are to be found in the Annual Report of the Superintendent of the Academy. As it is customary to print that report with the other reports of the War Department, further reference to those subjects is omitted from this report.

RECRUITING FOR THE ARMY.

At the beginning of the fiscal year 1913 there were 144 officers on general recruiting detail, and at the end of that year there were 144. The latter number includes 38 retired officers detailed under the provisions of the act of Congress approved April 23, 1904 (33 Stat. L., 264), an increase of six over the number detailed last year; 79 officers regularly on duty at, and 1 en route to, recruiting depots; and 1 officer inspecting recruiting stations.

On June 30, 1912, there were 144 central recruiting stations, and on June 30, 1913, there were 145. Of this latter number, 59 were main stations, each of which was in charge of a recruiting officer, and the remainder were auxiliary stations. In the New York City recruiting district there were four officers in charge of stations under the supervision of the recruiting officer in charge of the district. In addition to the main and central auxiliary stations, temporary stations were opened from time to time for the purpose of canvassing the territory of the recruiting districts.

The smallest number of cities and towns canvassed by officers of the general recruiting detail in any one month was 252; the largest number canvassed in any one month was 312. During the preceding year those figures were 243 and 268, respectively.

As in preceding years, applicants for enlistment accepted at recruiting stations were sent to recruit depots and depot posts for physical examination and enlistment if found qualified. The enlistment of applicants for the line of the Army at general recruiting stations under special instructions from the War Department, begun June 26, 1912, because of lack of funds for their transportation to depots before the close of the fiscal year, was ordered discontinued July 1, 1912. Before the instructions to discontinue these enlistments reached all of the recruiting stations, however, 22 enlistments were made at recruiting stations for the line of the Army.

The total number of enlistments and reenlistments for the Army, including the Hospital Corps, Quartermaster Corps, and Philippine Scouts, during the fiscal year ended June 30, 1913, was 25,086. Of these, 23,050 were enlisted or reenlisted for the line of the Army, 570 for the Hospital Corps, 338 for the Quartermaster Corps, 510 for other staff departments, and 618 for the Philippine Scouts.

The original enlistments numbered 17,798, of which 16,986 were for the line of the Army, 184 for the Hospital Corps, 155 for the Quartermaster Corps, 110 for other staff departments, and 363 for the Philippine Scouts. The reenlistments numbered 7,288, of which 6,064 were for the line of the Army, 386 for the Hospital Corps, 183 for the Quartermaster Corps, 400 for other staff departments, and 255 for the Philippine Scouts.

The plan, authorized by the Secretary of War April 1, 1912, and outlined in the annual report for the fiscal year 1912, of furnishing recruits at regular half-yearly intervals, determined in advance for each regiment and separate organization, was continued during the fiscal year covered by this report, except when recruits were lacking or there was need for deviation from that special plan.

The following table shows the number of applicants accepted and the number rejected at general recruiting stations, including those at auxiliary stations, during the fiscal year ended June 30, 1913:

Recruiting districts.	Number of applicants accepted.	Number of applicants rejected.	Total number of applicants.	Applicants accepted at stations and subsequently rejected at depots and depot posts.
Albany, N. Y.	176	1,052	1,228	18
Atlanta, Ga.	589	1,467	2,066	59
Baltimore, Md.	238	1,485	1,723	27
Boston, Mass.	406	2,284	2,690	52
Buffalo, N. Y.	357	2,286	2,643	40
Charlotte, N. C.	624	2,892	3,516	79
Chicago, Ill.:				
601 West Madison Street.	723	3,685	4,408	95
505 South State Street.	1,371	4,013	5,384	187
905 South State Street.	484	1,644	2,128	57
Cincinnati, Ohio.	552	1,504	2,056	71
Cleveland, Ohio.	183	1,234	1,417	19
Columbus, Ohio.	188	819	1,007	14
Dallas, Tex.	328	1,272	1,600	55
Denver, Colo.	557	3,769	4,326	113
Detroit, Mich.	724	4,195	4,919	141
Duluth, Minn.	181	1,377	1,558	16
El Paso, Tex.	147	340	487	14
Evansville, Ind.	401	991	1,382	46
Grand Rapids, Mich.	211	957	1,168	48
Harrisburg, Pa.	171	270	441	32
Huntington, W. Va.	345	1,383	1,728	51
Indianapolis, Ind.	961	1,844	2,805	171
Joplin, Mo.	375	2,770	3,145	48
Kansas City, Mo.	416	858	1,274	36
Knoxville, Tenn.	496	1,955	2,451	72
Lexington, Ky.	316	1,388	1,704	59
Little Rock, Ark.	295	1,007	1,302	34
Los Angeles, Cal.	227	461	688	15
Louisville, Ky.	507	1,313	1,820	55
Memphis, Tenn.	306	1,500	1,805	41
Nashville, Tenn.	239	709	948	40
Newark, N. J.	233	1,245	1,478	46
New Haven, Conn.	181	942	1,123	29
New Orleans, La.	249	550	799	38
New York, N. Y.	3,297	13,758	17,055	533
Oklahoma, Okla.	447	2,571	3,018	63
Omaha, Nebr.	292	652	944	45
Parkersburg, W. Va.	215	529	744	31
Peoria, Ill.	28	63	91	5
Philadelphia, Pa.	522	1,717	2,239	57
Pittsburgh, Pa.	240	810	1,050	38
Portland, Me.	234	1,595	1,829	38
Portland, Oreg.	141	608	749	20
Providence, R. I.	406	1,059	1,465	71
Richmond, Va.	175	625	800	20
Roanoke, Va.	230	477	707	30
St. Louis, Mo.	769	4,038	4,807	93
St. Paul, Minn.	355	882	1,237	44
Salt Lake City, Utah.	197	498	695	25
San Francisco, Cal.	1,061	4,443	5,504	136
Savannah, Ga.	300	1,454	1,754	21
Scranton, Pa.	165	1,017	1,182	21
Seattle, Wash.	154	426	580	12
Spokane, Wash.	185	557	742	27
Springfield, Ill.[1]	336	749	1,085	43
Springfield, Mass.	158	820	978	24
Syracuse, N. Y.	236	842	1,078	31
Terre Haute, Ind.	402	1,338	1,740	56
Toledo, Ohio.	211	1,307	1,518	32
Wichita, Kans.	225	631	856	35
Total.	24,737	98,927	123,664	3,469

[1] Main station changed from Springfield, Ill., to Peoria, Ill., June 4, 1913.

It will be seen from the foregoing table that 80 per cent of the applicants for enlistment at recruiting stations were rejected at those stations, also that 14 per cent of those accepted at stations were subsequently rejected at depots. These items for the preceding fiscal year were, respectively, 76 and 12 per cent.

Recruiting officers have been directed to make their personal examinations of recruits more thorough in order to reduce the number rejected at depots and depot posts.

The following table shows the number of enlistments (including reenlistments) for the Army and the number of applicants rejected at the recruit depots, depot posts, and other military posts, and in the field during the fiscal year ended June 30, 1913:

Station or post.	Number enlisted.	Number rejected.	Total number enlisted and rejected.
General recruiting stations	[1] 231	.....	[1] 231
Recruit depots:			
Columbus Barracks, Ohio	5,215	1,007	6,222
Jefferson Barracks, Mo	4,554	783	5,337
Fort Logan, Colo	1,598	345	1,943
Fort McDowell, Cal	994	157	1,151
Fort Slocum, N. Y	5,205	1,031	6,236
Total	17,566	3,323	20,889
Depot posts:			
Fort Bliss, Tex	100	.....	100
Fort Douglas, Utah	48	.....	48
Fort George Wright, Wash	153	29	182
Jackson Barracks, La	208	34	242
Fort Lawton, Wash	156	9	165
Fort Sam Houston, Tex	130	12	142
Fort Snelling, Minn	427	74	501
Vancouver Barracks, Wash	183	25	208
Fort William Henry Harrison, Mont	9	.....	9
Total	1,414	183	1,597
Military posts (other than depot posts)	4,217	137	4,354
In the field	842	7	849
Porto Rico Regiment of Infantry	198	41	239
Aggregate	24,468	3,691	28,159

[1] Of the 231 enlistments at general recruiting stations, 209 were of former soldiers, enlisted for duty with recruiting parties in the districts in which they were enlisted. The remaining 22 enlistments were made for various arms of the service on July 1, 1912, before instructions to cease such enlistments had reached all of the stations.

The foregoing table does not include 618 enlistments and 123 rejections for the Philippine Scouts. If these are included, the enlistments number 25,086 and the rejections 102,741, including 98,927 rejections at the general recruiting stations, a total of 127,827 enlistments and rejections during the fiscal year ended June 30, 1913, for the entire Military Establishment.

Of the applications rejected during the fiscal year, 19,670 were rejected because the applicants were minors, 4,834 because they were aliens, and 3,974 because they were illiterates. Of the applicants, 2,889 declined after acceptance to enlist at depots, most of them giving the seven year period of enlistment as one of the reasons for declining.

The following table shows the race and nativity of the men enlisted and reenlisted for the Army during the fiscal year ended June 30, 1913:

Race and nativity.	Regular Army.					Philippine Scouts.	Aggregate.
	Line of Army.	Staff departments, not including Hospital Corps and Quartermaster Corps.	Hospital Corps.	Quartermaster Corps.	Total.		
Native white:							
Enlistments	13,563	106	164	134	13,967	.....	13,967
Reenlistments	4,145	268	293	129	4,835	.....	4,835
Total	17,708	374	457	263	18,802	.....	18,802
Foreign white:							
Enlistments	2,055	4	16	14	2,089	.....	2,089
Reenlistments	1,045	126	65	40	1,276	.....	1,276
Total	3,100	130	81	54	3,365	.....	3,365
Colored:							
Enlistments	1,258	.....	2	6	1,266	.....	1,266
Reenlistments	742	6	26	9	783	.....	783
Total	2,000	6	28	15	2,049	.....	2,049
Indians:							
Enlistments	5	.....	.....	.....	5	.....	5
Reenlistments	22	.....	.....	.....	22	.....	22
Total	27	.....	.....	.....	27	.....	27
Porto Ricans:							
Enlistments	103	.....	2	1	106	.....	106
Reenlistments	103	.....	2	5	110	.....	110
Total	206	.....	4	6	216	.....	216
Filipinos:							
Enlistments	[1] 2	.....	.....	.....	2	363	365
Reenlistments	[1] 7	.....	.....	.....	7	255	262
Total	9	.....	.....	.....	9	618	627
Total enlistments	16,986	110	184	155	17,435	363	17,798
Total reenlistments	6,064	400	386	183	7,033	255	7,288
Aggregate	23,050	510	570	338	24,468	618	25,086

[1] Band musicians

Eighty-seven per cent of the original enlistments of white soldiers during the fiscal year ended June 30, 1913, were enlistments of men born in the United States. During the preceding fiscal year that percentage was 88, and during the fiscal year 1911 it was 89.

The following table shows, by months, the number of enlistments and reenlistments in the line of the Army during the three years ended June 30, 1913:

Months	Fiscal year ended— June 30, 1913.			June 30, 1912.			June 30, 1911.		
	Enlistments.	Reenlistments.	Total.	Enlistments.	Reenlistments.	Total.	Enlistments.	Reenlistments.	Total.
July	1,344	563	1,907	2,250	1,425	3,675	678	614	1,292
August	1,557	556	2,113	2,467	1,329	3,796	1,473	704	2,177
September	1,347	481	1,828	1,917	1,315	3,232	1,266	646	1,912
October	1,441	598	2,039	2,079	1,167	3,246	1,325	822	2,147
November	1,105	387	1,492	2,346	1,225	3,571	1,388	1,026	2,414
December	1,494	446	1,940	2,574	1,104	3,678	2,155	1,438	3,593
January	1,868	581	2,449	2,801	1,198	3,999	2,637	1,735	4,372
February	1,472	700	2,172	2,224	1,068	3,292	2,231	1,582	3,813
March	1,522	592	2,114	2,293	606	2,899	2,660	1,719	4,379
April	1,217	435	1,652	1,408	429	1,837	2,423	1,240	3,663
May	1,313	369	1,682	1,831	322	2,153	1,909	1,284	3,193
June	1,306	356	1,662	1,591	413	2,004	1,838	1,362	3,200
Total	16,986	6,064	23,050	25,781	11,601	37,382	21,983	14,172	36,155

The average total monthly enlistments obtained from the foregoing table are as follows: For the fiscal year 1911, 3,013; for 1912, 3,115; and for 1913, 1,921. It appears also that the falling off in reenlistments (within the three months' period) commenced in March, 1912, and in original enlistments in the following month of April. As the seven year enlistment period established by the act of August 24, 1912, did not go into effect until November 1, 1912, the falling off of enlistments during the seven and eight months preceding can scarcely be attributed to that law. It is also observed that the enlistments commencing with July and ending with October in the fiscal year 1911 were 659 less than during the same period in the fiscal year 1913, the enlistment period being three years in both cases. The total monthly enlistments for July, August, and September (since the close of the fiscal year) averaged 2,353, which is larger than that for any corresponding period in the last fiscal year.

While the number of reenlistments during any one month must vary with the number of men discharged within the preceding three months, no one cause can be pointed out as chiefly influencing original enlistments.

The table following shows, by branches of the service, the number of enlistments and reenlistments in the Army during the three years ended June 30, 1913.

Branches of service.	Fiscal year ended— June 30, 1913.			June 30, 1912.			June 30, 1911.		
	Enlistments.	Reenlistments.	Total.	Enlistments.	Reenlistments.	Total.	Enlistments.	Reenlistments.	Total.
Staff departments [1]	449	969	1,418	481	1,107	1,588	461	1,425	1,886
Engineers	52	151	203	99	222	321	90	309	399
Cavalry	6,484	1,154	7,638	5,884	1,820	7,704	6,222	2,472	8,694
Field Artillery	653	232	885	2,333	468	2,801	1,884	779	2,663
Coast Artillery Corps	4,073	1,505	5,578	7,107	3,480	10,587	4,205	4,033	8,238
Infantry	5,714	2,941	8,655	10,327	5,480	15,807	9,566	6,396	15,962
Miscellaneous	10	81	91	31	131	162	16	183	199
Total	17,435	7,033	24,468	26,262	12,708	38,970	22,444	15,597	38,041

[1] Including the Hospital Corps and Quartermaster Corps.

It is believed that the relative increase or decrease in the number of enlistments and reenlistments in the respective branches of the service will be more apparent if the numbers in the foregoing table are reduced to percentages of the total number of enlistments and reenlistments each year. Consequently the following table, showing those percentages, is presented:

Branches of service.	Percentages of total number of enlistments and reenlistments during the fiscal year ended—								
	June 30, 1913.			June 30, 1912.			June 30, 1911.		
	Enlistments.	Reenlistments.	Total.	Enlistments.	Reenlistments.	Total.	Enlistments.	Reenlistments.	Total.
Staff departments [1]	1.84	3.96	5.80	1.23	2.84	4.07	1.21	3.75	4.96
Engineers	.21	.62	.83	.25	.57	.82	.24	.81	1.05
Cavalry	26.50	4.71	31.21	15.10	4.67	19.77	16.36	6.50	22.86
Field Artillery	2.67	.95	3.62	5.99	1.20	7.19	4.95	2.05	7.00
Coast Artillery Corps	16.65	6.15	22.80	18.24	8.93	27.17	11.05	10.60	21.65
Infantry	23.35	12.02	35.37	26.50	14.06	40.56	25.15	16.81	41.96
Miscellaneous	.04	.33	.37	.08	.34	.42	.04	.48	.52
Total	71.26	28.74	100.00	67.39	32.61	100.00	59.00	41.00	100.00

[1] Including the Hospital Corps and the Quartermaster Corps.

It appears from the foregoing table that, as compared with the whole number of enlistments and reenlistments, the relative number of reenlistments during the fiscal year 1913 was less than during either of the two preceding fiscal years.

It is believed that a comparison of the numbers of reenlistments in the several branches of the service with the authorized enlisted strength of those branches will show more accurately the relative number of reenlistments in the several branches of the service. The table following shows the number of reenlistments to each 1,000 of the authorized strength of the several branches of the service during the fiscal years 1913, 1912, and 1911.

Branches of service.	Number of reenlistments to each 1,000 of the authorized enlisted strength during the fiscal year ended—		
	June 30, 1913.	June 30, 1912.	June 30, 1911.
Staff departments [1]	167	472	244
Engineers	78	114	154
Cavalry	82	132	194
Field Artillery	42	86	149
Coast Artillery Corps	81	188	209
Infantry	87	174	248
Miscellaneous	9	15	19
The Army	80	156	194

[1] Including the Hospital Corps, but not including the Quartermaster Corps.

It is evident from the foregoing table that, as compared with the authorized strength, there was a marked decrease in the relative number of reenlistments in each branch of the service.

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ARMY RESERVE.

Authority for the establishment of the Army reserve is contained in the second paragraph of section 2 of the Army appropriation act, approved August 24, 1912 (37 Stat. L., 590). The provisions of the act authorizing the establishment of the reserve became effective November 1, 1912.

The authorized reserve is to consist of (1) soldiers furloughed to the reserve for the unexpired portions of seven year terms of enlistment, either after four years' service with an organization of which they formed a part, or, upon their application, after three years' service with an organization; and (2) those who enlist or reenlist in the reserve after having been honorably discharged from the Regular Army.

General Orders, No. 11, War Department, 1913, contains information relative to the composition of the reserve and the status of the reservists, a description of the system to be used in keeping records of them, and instructions relative to recruiting for the reserve. Instructions were also issued (par. I, General Orders, No. 26, War Department, Apr. 15, 1913) requiring that soldiers then in service who had enlisted prior to November 1, 1912, be made fully acquainted with the provisions and purposes of the law creating the reserve, and that efforts be made to induce such of those men as were qualified and did not intend to continue in active service to enlist in the reserve. Instructions were also issued that, with the enlistment papers, there be forwarded to this office the applications of such recruits as desire transfer to the reserve at the end of three years' service with an organization.

Approximately 21,000 men enlisted in the Army between November 1, 1912, and August 31, 1913, and of those, 61 have made application to be furloughed to the reserve at the expiration of three years' service with an organization.

On August 31, 1913, the reserve consisted of 8 men, 7 of them enlisting in New York City and vicinity, and 1 in Porto Rico.

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SMALL-ARMS FIRING.

As the regular target practice season varies in the several departments, and in some instances extends to the close of the calendar year, it has been found to be impracticable to make a complete statement of the results of the practice for the year 1913 in the current annual report. It has been the custom to announce the results of target practice in War Department general orders or bulletins as soon as the reports for the year have been received, examined, and digested.

The results of the small-arms firing of the several organizations of the line of the Army in target practice for the year 1912, not including the organizations stationed in the Philippine Islands, were published in Bulletin No. 16, War Department, April 12, 1913. Because of the fact that under the Provisional Small-Arms Firing Manual, 1909, qualification in the grades of expert rifleman and sharpshooter was made more difficult there has been a decrease in the

number of qualifications in rifle firing in those grades for 1910, 1911, and 1912, as compared with the number for the year 1909. There was a marked improvement, however, in the grades of sharpshooter and marksman for the year 1912. For the target year 1910, 2,151 expert riflemen, 8,857 sharpshooters, and 5,741 marksmen; for the target year 1911, 1,211 expert riflemen, 7,326 sharpshooters, and 5,196 marksmen, and for the target year 1912, 1,312 expert riflemen, 9,323 sharpshooters, and 6,307 marksmen of the line of the Army were reported as qualified, as against 2,875 expert riflemen, 9,790 sharpshooters, and 5,815 marksmen for the year 1909. The decrease was due also, to some extent at least, to the fact that only officers who actually fired were classified for the target years 1910, 1911, and 1912, and that some organizations were excused from record practice because of the exigencies of the service during the period of the regular small-arms practice.

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The following table shows the number of competitors in each of the competitions for the year 1913:

Competitions.	Number of competitors.					
	Rifle.			Revolver.		
	Enlisted men.	Commissioned officers.	Distinguished marksmen.	Enlisted men.	Commissioned officers.	Distinguished marksmen.
Eastern	112	10	4	37	10	6
Southern	71	7	4	79	8	5
Western	89	7	1	31	8	.....
Army	56	3	.....	34	10	.....

The number of medals awarded to the successful competitors in those competitions is shown in the following table:

Competitions.	Number of medals awarded.			
	Rifle.		Revolver.	
	Enlisted men.	Commissioned officers.	Enlisted men.	Commissioned officers.
Eastern	22	1	7	1
Southern	14	2	15	5
Western	18	.....	6	.....
Army	12	.....	12	3

The National Board for the Promotion of Rifle Practice arranged for the holding of the several annual competitions for 1913 on the Ohio State range at Camp Perry, Ottawa County, Ohio, and prescribed conditions and regulations for those competitions. Those conditions and regulations, having received the approval of the Secretary of War, were published in Bulletin No. 3, War Department,

January 31, 1913. The competitions began August 25, 1913, with the national individual match, followed by the national team match and the national revolver match, under the supervision of Brig. Gen. Robert K. Evans as executive officer. In the national team match there were entered 2 teams, 1 Cavalry and 1 Infantry, from the Army, 1 from the Navy, 1 from the Marine Corps, and 41 teams from the Organized Militia. No teams were sent by the Organized Militia of Arkansas, Delaware, Idaho, Louisiana, Missouri, Nebraska, Nevada, New Hampshire, or South Dakota. The competing teams were divided into three classes, A, B, and C, upon the basis of their relative standing in the national team match of 1911, and prizes were awarded to each of the teams making the four highest aggregate scores in each class.

The following table shows the winning teams, the scores made, and the prizes won in that competition:

Order.	Team.	Score.	Prize.
	Class A.		
1	United States Cavalry	2,675	National trophy and $450.
2	United States Navy	2,655	$350.
3	Oregon	2,605	$300.
4	United States Marine Corps	2,602	$250.
	Class B.		
1	Alabama	2,547	Hilton trophy and $350.
2	Texas	2,542	$250.
3	Indiana	2,529	$225.
4	Florida	2,508	$200.
	Class C.		
1	Utah	2,493	Bronze soldier of Marathon and $300.
2	Rhode Island	2,450	$200.
3	Montana	2,416	$175.
4	Wyoming	2,373	$150.

A bronze medal was also awarded to each member of the winning teams, the medals for each class being of a different design.

The interest manifested by the militia in the national team matches is shown by the number of entries each year since the institution of those matches. Eleven State teams were represented in 1903, 19 in 1904, 32 in 1905, 37 in 1906, 43 in 1907, 45 in 1908, 43 in 1909, 38 in 1910 and in 1911, and 41 in 1913. It is observed that the maximum number of State teams represented was reached in 1908. There was no national team match in 1912.

The first prize in the national individual match—a gold medal and $60—was won by Artificer Edward W. Sweeting, Company I, Sixteenth Pennsylvania Infantry, with a score of 238, and the first prize in the national revolver match—a gold medal and $30—was won by J. H. Snook, Columbus Revolver Club, with a score of 393.

The detailed results of the matches at Camp Perry will be published in a War Department bulletin as soon as the returns shall have been digested and the compilations completed.

MOBILIZATION OF SECOND DIVISION.

Under orders issued from the War Department February 21 and 24, 1913, the three brigades of the Second Division, with the division

staff and divisional troops, moved from their regular stations to Galveston and Texas City, Tex. The division headquarters is located at the latter place. The strength of the organizations involved in this movement was approximately 11,450 officers and men.

TROOPS ENFORCING NEUTRALITY LAWS ON THE MEXICAN BORDER.

There are now on duty in connection with the enforcement of the neutrality laws on the Mexican border the following named organizations of the Army: Battery A, Third Field Artillery; Battery C, Sixth Field Artillery; Company I, Signal Corps, and the Second, Fifth, Ninth, Thirteenth, and Fourteenth Regiments of Cavalry. The strength of these organizations is approximately 4,350 officers and men.

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UNITED STATES MILITARY PRISON.

By law the government and control of the United States Military Prison is vested, under the Secretary of War, in the Board of Commissioners of the United States Soldiers' Home, and the president of that board is required to submit to the Secretary of War annually a statement of the financial and other affairs of the prison. It is believed, therefore, to be unnecessary to present in this report anything with regard to the United States Military Prison or the Pacific Branch thereof other than to show the number of general prisoners in confinement there.

At the beginning of the fiscal year 953 general prisoners were in confinement at the United States Military Prison, Fort Leavenworth, Kans. During the year 863 general prisoners were received, 793 were released upon expiration of sentence, 51 were released by remission of sentence, 4 escaped, 3 died, and 14 were transferred to other places of confinement, leaving 951 general prisoners in confinement there on June 30, 1913.

At the beginning of the year there were 473 general prisoners in confinement at the Pacific Branch of the United States Military Prison. During the year 353 general prisoners were received, 380 were released upon expiration of sentence, 37 were released by remission of sentence, and 20 were transferred to other places of confinement, leaving 389 general prisoners in confinement there on June 30, 1913.

GENERAL PRISONERS.

At the beginning of the fiscal year 1913 there were 2,282 general prisoners in custody. Of this number 781 were in confinement at military posts, 15 at the United States Penitentiary, Leavenworth, Kans., 953 at the United States Military Prison, Fort Leavenworth, Kans., 473 at the Pacific Branch, United States Military Prison, Alcatraz Island, Cal., 34 at the Government Hospital for the Insane, Washington, D. C., and 26 were in transit from one place of confinement to another.

During the fiscal year 2,596 general prisoners were committed to confinement, 22 escaped prisoners were recaptured, 2,357 general

prisoners were released at expiration of sentence, 49 escaped, 10 died, 8 were paroled, and the whole of the unexecuted part of the sentence was remitted in 129 cases, leaving 2,347 general prisoners in custody on June 30, 1913. Of the number in confinement at the end of the year, 920 were at military posts, 13 at the United States Penitentiary, Leavenworth, Kans., 951 at the United States Military Prison, Fort Leavenworth, Kans., 389 at the Pacific Branch, United States Military Prison, Alcatraz Island, Cal., 35 at the Government Hospital for the Insane, Washington, D. C., and 39 were in transit from one place of confinement to another.

It will be seen from the foregoing figures that at the end of the year there were 139 more general prisoners in confinement at military posts than there were at the beginning of the year, 1 more at the Government Hospital for the Insane, and 15 more in transit, while there were 2 less in the number confined at the United States Penitentiary, 2 less at the United States Military Prison, and 84 less at the Pacific Branch, United States Military Prison, making a net increase in the number in confinement at the end of the year of 65.

The number of general prisoners reported to have escaped during the year was 15 more than during the preceding year and 3 more than during the fiscal year 1911. Of the 49 escapes reported, 4 occurred at the United States Military Prison, Fort Leavenworth, Kans., and the remainder (45) escaped from the military posts at which they were confined. The largest number of escapes from military posts were reported as having occurred at the Presidio of San Francisco, Cal., Fort McPherson, Ga., and Vancouver Barracks, Wash., those numbers being 6 for the first and 4 each for the latter two posts. During the preceding year the largest numbers of escapes occurred at Fort Sheridan, Ill., and Fort Jay, N. Y., those numbers being 5 and 4, respectively. During the past fiscal year 3 escapes were reported from Fort Bliss, Tex., and Camp John Hay, P. I.; 2 from Fort Adams, R. I., Fort Hamilton, N. Y., Fort Jay, N. Y., Fort Myer, Va., Fort Totten, N. Y., Fort Riley, Kans., and Fort Lawton, Wash.; 1 from Jackson Barracks, La., Fort Oglethorpe, Ga., Fort Williams, Me., Fort D. A. Russell, Wyo., Fort Leavenworth, Kans., Fort Logan H. Roots, Ark., Fort Sheridan, Ill., Fort Sam Houston, Tex., Fort Douglas, Utah, Fort Worden, Wash., and Jefferson Barracks, Mo., respectively.

The practice, inaugurated in February, 1912, of separating, as far as practicable, prisoners convicted of purely military offenses from those convicted of statutory or common law crimes or misdemeanors was continued throughout the past fiscal year.

As in previous years, applications for clemency in the cases of prisoners undergoing confinement in the execution of sentences of general courts-martial added materially to the correspondence of the office. At the beginning of the fiscal year 138 applications for clemency, previously made, had not received final consideration, they having been referred to the commanding generals of military divisions or elsewhere in the course of investigation as to the merits of the cases. During the year 1,573 applications for clemency were received, but 61 of these were cases in which other applications were pending at the date of their receipt. Clemency was denied in 1,229 cases, the unexecuted parts of sentences were remitted in 103 cases,

parts of the unexecuted sentences were remitted in 182 cases, and in 6 cases recommendation was made to the Department of Justice for parole under the provisions of the act of Congress approved June 25, 1910 (36 Stat. L., 819). Before final action had been taken on applications for clemency in their cases 4 general prisoners had been released upon expiration of sentence. At the close of the fiscal year 126 cases under consideration had not been acted upon because investigations as to their merits had not been completed.

The number of cases received does not represent the number of individual prisoners by whom, or in whose behalf, applications for clemency were made. In many cases as soon as one application is denied another is presented, as many as 9 consecutive applications having been received during the year in the case of one general prisoner. The 1,520 cases acted upon during the year were applications in the cases of 1,322 general prisoners, as against 1,597 applications in the cases of 1,402 general prisoners acted upon during the preceding year.

The unexecuted parts of sentences of confinement were remitted by the War Department in the cases of 8 general prisoners during the past fiscal year upon the recommendations of the commandants of the prisons who had been authorized, in order to give special recognition at suitable times to those who had gained the most meritorious records, to recommend for clemency on the Fourth of July and Thanksgiving Day of each year 2 general prisoners at the United States Military Prison and 2 at the Pacific Branch who had served not less than 18 months of their terms of confinement and who had the best records of conduct at the prisons.

In addition to the cases considered upon applications the unexecuted parts of sentences were remitted by the War Department for administrative reasons in the cases of 10 general prisoners without applications for clemency having been made in their behalf.

The number of applications for clemency acted upon by the commanding generals of the several military divisions and departments is unknown. The whole of the unexecuted parts of sentences were remitted by commanding generals in 16 cases, making a total of 129 cases in which the whole of the unexecuted parts of sentences of confinement were remitted by the War Department or by subordinate military authorities during the year. During the preceding year the whole of the unexecuted sentences were remitted by commanding generals in 39 cases, making a total of 162 cases in which the whole of the unexecuted parts of the sentences of confinement were remitted by the War Department or by subordinate military authorities during that year. It will be observed, however, that the numbers of remissions of sentences by division or department commanders, before shown, include only general prisoners in whose cases execution of the sentences of confinement had been begun and does not include cases in which the sentences of confinement were remitted by commanding generals at the time the records of the courts-martial were acted upon, the number of the cases of the latter class being unknown to this office.

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PERSONAL IDENTIFICATION SYSTEM.

The use of finger prints, photographs, and personal descriptions as a means of personal identification was continued during the past fiscal year. At the close of that year 250,578 finger-print records had been received in this office. Of these, 75,873 were made in cases of reenlistment in which records made during the previous service were on file. As was stated in preceding annual reports of this office, it has been found to be necessary to obtain finger-print records of men reenlisting, although finger-print records of these men made during a prior service are on file. This is necessary for the purpose of detecting cases, several of which have been discovered, in which a man with a discharge certificate in his possession claimed the service represented by, and enlisted under the name appearing in, that discharge certificate, although it was established beyond doubt when his finger prints were received in this office that he was not the man he claimed to be. On June 30, 1913, this office had on file finger-print records of 174,705 individuals who were then or had been previously enlisted men in the Army.

During the fiscal year ended June 30, 1913, 256 cases of fraudulent enlistment by former deserters, general prisoners, and others were discovered through the operation of the finger-print system of personal identification. During the preceding year the number of cases of fraudulent enlistment discovered through this system was 337, and during the fiscal year 1911 the number was 326. Of the 256 cases of identity discovered during the past fiscal year, 23 had been withdrawn from military control when the discovery was made. Of the remaining 233 cases, 20 were held in service, 185 were dishonorably discharged and confined for various periods by sentences of general courts-martial, 10 were discharged without honor, 5 were discharged on surgeon's certificate of disability, and in 13 cases no report of final determination has been received.

The finger-print records and photographs have not only led to the apprehension of criminals who have enlisted in the Army for the purpose of escaping detection, but have doubtless deterred criminals from attempting to enter the Army for that purpose.

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OFFICIAL RECORDS OF THE UNION AND CONFEDERATE ARMIES.

Four sets of the Official Records of the Union and Confederate Armies, consisting of 512 books and 712 atlas plates, were distributed during the fiscal year, upon orders received from Senators, Representatives, and Delegates to the Fifty-seventh Congress, to permanent libraries and educational institutions designated by them under the provisions of the act of Congress approved March 3, 1903 (32 Stat. L., 1145).

No sale of the Official Records of the Union and Confederate Armies, or any part thereof, was made by The Adjutant General's Office during the past fiscal year.

ROSTER OF OFFICERS AND ENLISTED MEN OF THE UNION AND CONFEDERATE ARMIES.

The compilation of the "Complete roster of officers and enlisted men of the Union and Confederate Armies," authorized and required to be compiled by a provision contained in the legislative, executive, and judicial appropriation act approved February 25, 1903 (32 Stat. L., 884), was continued during the year. The compilation of this roster did not progress as rapidly during this year as in preceding years, because the reduction in the clerical force of the office, referred to in another paragraph, fell chiefly on the class of clerks engaged in this kind of work.

The Union part of the roster has long since been virtually completed and the only work that remains to be done is that connected with the compilation of the Confederate service records. The work on the Confederate records has progressed so far that the clerical force is now engaged in reproducing the records of Virginia organizations in the Confederate service. It is probable that the work on the records of those organizations will be completed during the current fiscal year, leaving to be done in connection with the Confederate part of the roster only that work relating to Confederate organizations that were not credited to any particular State. There also remains considerable work to be done in connection with the reproduction of the Confederate hospital records. As was stated in the last annual report, the reproduction of the records of men in service from any one State will not be completed until the Confederate medical records have been reproduced, because records of service in the Confederate Army are to be found in many instances on the medical records only, which is due to the incompleteness of the collection of the Confederate military records in the possession of the War Department.

Preceding annual reports of The Adjutant General of the Army contain detailed statements with regard to the methods adopted to make the collection of Confederate records in the possession of the War Department as complete as possible, and the method of reproducing those records by the index-record card system as a preliminary step in the compilation of the roster of officers and enlisted men in the Confederate Army.

Consideration of the manner of compiling the service records of the Regular Army (Federal) has not yet been taken up. It is probable, however, that the compilation will be made, as soon as the work on the Confederate part of the roster has been completed, in the same manner as both the Union (volunteer) and the Confederate service records were compiled.

The legislation under which the compilation of this roster is being made does not require its publication, but Congress no doubt intended that the authority necessary for the publication should be given when the work of compilation should have been completed or should have been sufficiently advanced to justify the beginning of the publication. It is believed that that work has advanced sufficiently to warrant some consideration in the near future of the question of the publication of the roster. This matter will be taken up in a special report, with a view to obtain legislative authority for, and to determine the general style of, the proposed publication of this roster.

MEDALS OF HONOR.

During the fiscal year ended June 30, 1913, there were 10 medals of honor issued by the War Department. Of these, 2 were issued to replace medals of the old design and 8 were original issues of medals awarded during the year. The whole number of awards of the congressional medal of honor up to and including June 30, 1913, was 2,619. Medals of honor are issued by the War Department under the provisions of the act of Congress approved April 23, 1904 (33 Stat. L., 274).

CAMPAIGN BADGES.

A summary of the campaigns for which the issue of campaign badges has been authorized is published in General Orders, No. 129, War Department, August 13, 1908. The issue of those badges, which are intended "to commemorate services which have been or shall hereafter be rendered in campaign," was authorized by General Orders, No. 4, War Department, January 11, 1905.

During the past fiscal year 243 names were added to the lists of officers and enlisted men who were found to be entitled to campaign badges, making a total of 40,688 officers and enlisted men found to be entitled to those badges. Of these, 29,632 were entitled to Philippine campaign badges, 7,207 to Spanish campaign badges, 1,616 to China campaign badges, 1,810 to Indian campaign badges, and 423 to Civil War campaign badges.

The campaign badges are issued as articles of uniform to officers and enlisted men in service by the Chief of the Quartermaster Corps on data furnished by The Adjutant General's Office.

It was decided by the Secretary of War in 1908 that campaign badges may be issued to members of the Organized Militia who are entitled to wear the uniform of the United States Army and whose service conforms to the requirements of General Orders, No. 129, before cited. Since the date of that decision (May 26, 1908) data have been furnished to the Chief of the Quartermaster Corps in the cases of approximately 1,775 members of the Organized Militia who made application for campaign badges.

In addition to the campaign badges before referred to, the issue of a service badge, to be known as the Army of Cuban Pacification badge, was authorized by General Orders, No. 96, War Department, May 11, 1909. Data have been furnished to the Chief of the Quartermaster Corps in the cases of 6,207 applications for those badges since the date of the order authorizing their issue. The Army of Cuban Pacification badge is issued to officers and enlisted men who were in service on May 11, 1909, or thereafter, and who served as officers or enlisted men in Cuba with the Army of Cuban Pacification between October 6, 1906, and April 1, 1909.

The issue of a certificate of merit badge and ribbon to each officer and enlisted man in the service to whom a certificate of merit had been or might thereafter be issued was authorized in General Orders, No. 4, War Department, January 11, 1905, as amended in General Orders, No. 129, War Department, August 13, 1908. The badge and ribbon prescribed by these orders are a part of the uniform, and are to be worn in the manner prescribed for campaign badges. At the close of the last fiscal year 194 certificate of merit badges had been issued.

PHILIPPINE SERVICE MEDAL.

The issue of "Philippine service medals," so called, is authorized by the act of Congress approved June 29, 1906 (34 Stat., L., 621). Those medals are issued by the Chief of the Quartermaster Corps on data furnished by The Adjutant General's Office. They are, under the terms of the act cited, "to be presented to each of the several officers and enlisted men and families of such as may be dead, who, having volunteered and enlisted under the calls of the President for the War with Spain, served beyond the terms of their enlistment to help to suppress the Philippine insurrection, and who subsequently received an honorable discharge from the Army of the United States, or who died prior to such discharge."

Up to and including June 30, 1912, statements as to whether or not service upon which the application was based was such as to authorize the issue of that medal had been made by The Adjutant General's Office in 7,141 cases. During the past fiscal year similar statements were made in 134 cases, making a total of 7,275 applications for Philippine service medals received since the enactment of the legislation before cited. In 6,299 of these cases the service was found to be such as to come within the provisions of the law, and in the remaining 976 cases the service was found to be such as to preclude the issue of the medal. In a great majority of the cases of the latter class the applicants, or the persons on account of whose service applications were made, did not enter the service under a call of the President for the War with Spain, or did not serve in the Philippine Islands, or did not serve in the Philippine Islands after the termination of the War with Spain, or the service was not terminated honorably.

In the case of each of the applications received the Chief of the Quartermaster Corps was advised with regard to the record of the applicant or the person on account of whose service the application was made.

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GEO. ANDREWS,
The Adjutant General.

REPORT OF THE INSPECTOR GENERAL.

WAR DEPARTMENT,
OFFICE OF THE INSPECTOR GENERAL,
Washington, August 27, 1913.

From the Inspector General of the Army.
To the Secretary of War.
Subject: Annual report for fiscal year that ended June 30, 1913.

I submit the following report in relation to the duties performed by the Inspector General's Department during the fiscal year that ended June 30, 1913:

PERSONNEL OF THE DEPARTMENT.

The number of officers in the permanent corps is the same as was reported last year; namely, one brigadier general and two colonels.

During much the greater part of the year one of the colonels was not on duty in the department, having been detailed for duty at the Army War College, Washington, D. C.

One colonel, four lieutenant colonels, and nine majors were doing duty as inspectors general under the provisions of the act of February 2, 1901; and four acting inspectors general, consisting of one colonel, one lieutenant colonel, and two majors, were doing duty under the act of June 23, 1874.

These officers performed the numerous, varied, and delicate duties pertaining to their position with commendable zeal, efficiency, and impartiality.

INSPECTIONS.

The inspection of the Military Establishment during the past fiscal year was approximately complete and included the Military Academy, the service schools, the garrisoned posts, camps of maneuver and instruction, tactical inspections of troops, the staff offices at department headquarters, the general hospitals, the arsenals and armories, the depots of the staff departments, the recruit depots and main recruiting stations, the military prisons, the biennial inspections of such ungarrisoned posts and national cemeteries as were due, the required inspections of Army transports upon arrival at and departure from ports, the cable boats, mine planters, and harbor boats of the Quartermaster Corps. Numerous inspections of unserviceable property presented for condemnation and the inspections of the money accountability of all disbursing officers of the Army were also made. The prescribed annual inspection of the Soldiers' Home, District of Columbia, and of the headquarters and branches of the National Home for Disabled Volunteer Soldiers, from Maine to California, was also included in the year's work.

All irregularities and deficiencies noted in these inspections were reported in due and prescribed form, and the necessary steps were promptly taken to secure speedy and proper remedial action.

In addition to the numerous and varied inspections regularly assigned to the department and enumerated above, the officers of the Inspector General's Department made a large number of special investigations during the year under orders of the War Department and of department commanders.

THE LINE OF THE ARMY.

It has been recommended, and it is believed wisely, that the mobile troops of the Army be kept at war strength at all times. This, it appears, could be accomplished under existing laws and with small additional expense by transferring the Philippine Scouts to the Philippine Constabulary. This plan would place the cost of their maintenance upon the Philippine Government, and the 5,732 men now required for that force could be added to the mobile army, thus bringing the strength of the Military Establishment almost up to the 100,000 men authorized by the act of February 2, 1901.

It is believed that the regiments now in the Philippines should be brought back to the United States when they have completed their tour of service there, and that they should be replaced by regiments organized since 1901.

Of the regiments now in the Philippines, the Seventh Cavalry has made a fine record since its organization, July 28, 1866, and has always been distinguished for its esprit and for the regimental loyalty of both its officers and enlisted men. It is known throughout the world, and certainly nothing should be done that would practically destroy it, as would be the calamitous effect of disorganizing it by transferring all of its officers, many of whom have served with it for a number of years. As much may be said of the Eighth Cavalry, also organized in 1866; of the Eighth Infantry, which was organized in 1838 and fought throughout the Mexican War, the Civil War, in subsequent Indian campaigns, and the War with Spain; and of the Thirteenth and Fifteenth Infantry, which were organized in 1861 and fought through the Civil War and subsequent wars. The Twenty-fourth Infantry was organized in 1866 and has participated in Indian campaigns, the War with Spain, and service in the Philippines. There being only two infantry regiments of colored men, both with practically the same history, if it is intended to keep one such regiment in the Philippines it might as well be the Twenty-fourth as the Twenty-fifth.

It would seem to be in the interest of service pride and efficiency to bring these regiments home at the end of their period of Philippine service and replace them by regiments organized since 1901, which, through no fault of their own, have had no war service and therefore have no history. The change can not well be effected by any other transfer than bringing the regiments back to the United States, because only in that way can the troop and company records and the soldiers identified with the regiments be held together. It is presumed, of course, that the regiments now in the Philippines were selected in the first place because they were first on the roster for Philippine service, and it is a good time to make the change when they complete that service. If necessary, the roster should be departed from in order to secure regiments of higher numbers than 10 in the Cavalry and 25 in the Infantry for Philippine service.

It is proposed to organize the regular Infantry within the continental limits of the United States, in case of war, into three divisions, which will require six regiments of Field Artillery; the regular Cavalry within the same limits will form two divisions, requiring at least one regiment of Horse Artillery; the field Army will also require at least one regiment of heavy Field Artillery—making in all eight regiments of Field Artillery.

It is understood that as soon as quarters are available one battalion of Mountain Artillery will be sent to Panama, which will leave but three and one-half regiments of Field Artillery in the United States. It is therefore apparent that the Field Artillery should be increased by four and one-half regiments, or the equivalent in battalions.

This matter is recommended for consideration by the General Staff in connection with any proposed legislation.

It is recommended that the Field Artillery Board now stationed at Fort Riley, Kans., be transferred to Fort Sill, Okla.; that the commandant of the School of Fire be a member of that board; that this reconstituted board direct and control the Field Artillery policy, including the methods of the School of Fire; that an officer of high rank be detailed to supervise and coordinate the work of the School of Mus-

ketry and School of Fire for Field Artillery, both of which are now located at Fort Sill.

It is the opinion of this office that it would be in the interests of the Army as a whole if some of the officers of each arm of the service were detailed to serve for stated periods with the troops of other arms. The peculiar duties, capabilities, and limitations of each arm would, as a result, be better known by the officers of the other branches. Such knowledge is fully as desirable as a knowledge of staff duties, which officers are now detailed from the line to acquire as a necessary part of their professional education.

TACTICAL INSPECTIONS.

The year's work showed the continued and increasing value of these inspections, and their tendency to greatly promote and increase the efficiency of the troops in every way is generally reported.

The tactical inspections are the most important pertaining to troops, and amply justify the heavy additional work they entail, as they make more apparent the deficiencies in personnel, material, administration, and supply than any other form of inspection. When the remedial action taken on defects and deficiencies has had time to be effectively applied, the beneficial results of these inspections will be more apparent.

The present provisions for the annual tactical inspections (par. 904, Army Regulations) contemplate, whenever practicable, that these inspections be made when the troops of the three arms are assembled for field exercises. This principle should be insisted upon for the educational benefit of higher commanders.

FIELD TRAINING.

Reports of Cavalry tactical inspections show that more instruction and practice are needed in issuing field orders, especially verbal orders, and in the training of Cavalry in " information and security."

Also, it appears that many officers of the different arms do not possess a good working knowledge of the principles laid down in the Field Service Regulations, and that they give too little study to the tactical handling of their own proper units under the varying conditions of actual service. This can be corrected in the postgraduate work in garrison by simpler problems, so as to bring out the principles of patrolling and combat of small units.

It is recommended that in maneuvers in the insular possessions the Army and Navy cooperate in the solution of problems based upon conditions that would probably exist in actual war.

EQUIPMENT.

Inspections have shown that there is no uniform practice nor guide as to the field equipment. It is seldom that two or more organizations are similarly equipped when turned out for inspection in the field, nor do any two commanding officers appear to agree as to what constitutes the field equipment. This absence of a standard field equipment results in many different interpretations of existing

orders on the subject and usually causes an increase in the number of articles deemed to be necessary, with a constant increase of the wagonloads. Troops very rarely turn out without considerable excess baggage.

Very few criticisms of the new Infantry equipment have been received. The new Cavalry equipment is still undergoing test.

Considerable complaint as to the poor quality of the material of the shelter tent and wagon cover has been reported.

Reports show that the wear and shrinking of the flaps which close the cartridge pockets of the web cartridge belts and the pulling out of the eyelets to which the haversack is attached are the principal causes of the condemnation of those belts. It is suggested that flaps be supplied, so that defective ones can be replaced, as I understand is now done in a few scout organizations. Also, the eyelets should be replaced by metallic hangers. A shorter belt for native troops is recommended by the inspector general, Philippine Department.

THE RATION.

There is no uniformity in the ration carried by troops in the field in peace maneuvers. The components vary greatly in kind and amount. Existing regulations authorize commanding officers to determine the character of the subsistence appropriate for the particular service required, but reports show that the results obtained by the above regulation are not satisfactory. The garrison ration is composed of more than 40 different components and is not suitable except for garrison or permanent camp. There should be a designated ration for issue in kind in the field in time of peace.

Inspections of Field Artillery commands under orders to use the haversack ration developed that—

First. The Quartermaster Corps did not, for all the organizations of the command, have a uniformly packed haversack ration.

Second. That there were no suitable containers supplied to the command for carrying such components of the haversack ration as were issued in bulk by the Quartermaster Corps.

INSTRUCTION.

Reports indicate an improvement in the instruction of troops, especially in matters connected with field efficiency.

The small progress made in the development of bayonet combat is believed to be due to two causes—the lack of a suitable equipment and the scarcity of officers with a practical knowledge of the principles of bayonet fencing. Practical instruction for company officers should be included in the instruction given at the School of Musketry. Special attention should be given to this matter at the United States Military Academy.

RECRUITING.

Reports received in this office show that at many stations in various parts of the country there has been a marked decrease in the number of accepted applicants for enlistment as compared with the preceding year. Various causes were assigned to account for this fact, the chief one being the seven-years enlistment period. Recruit-

ing officers and members of recruiting parties have carefully explained to applicants the nature of the enlistment contract with reference to service with the colors and in the reserve, but the applicants are not satisfied and frequently express themselves as unwilling to enlist because of the reserve feature, which places them under obligations for too long a period. One inspector reports that "careful inquiry of 425 former soldiers eligible for enlistment in the Army reserve, during the month of April, 1913, resulted in enlisting only 3 men."

The system of examination and elimination of unfit applicants at the recruit depots is excellent, as is also the system of recruit training. A comparison between the civilian applicant and the recruit who has finished the regular course is convincing as to the quality of the work.

UNIFORM.

There has been a great deal of criticism of the present method of issuing clothing. It is believed that the failure of organization commanders to keep the required records up to date is largely responsible for the trouble, which usually results in men being issued the wrong sizes, necessitating numerous exchanges.

It is believed, however, that the system of issues might well be modified so as to permit of issues to individuals, settlement to be made at the end of the month on proper vouchers.

Complaints continue as to the lack of uniformity in articles of clothing, due to the issue of old stock of different patterns.

The cotton service uniform is still unsatisfactory, and the new campaign hat is objectionable on account of stiffness of the brim. The material of the poncho is of poor quality; the sweater is too light in weight and not sufficiently roomy either for warmth or comfort.

There are many complaints that the olive-drab shirt shrinks excessively. More shrinkage should be given the material before manufacture.

Reports received show that at many posts there are stocks of shoes of obsolete pattern on hand for issue; and at one post there were as many as 11 different kinds—3 kinds of black and 8 of russet. One variety of these shoes was purchased as far back as 1889—24 years ago. In some cases the issue price of the old shoes has been reduced to less than half their original cost, in order to facilitate their being absorbed by the service. These shoes should be sold, as the present situation is most unsatisfactory. From reports of sales by other branches of the Government service, it is believed that the sale of these shoes, instead of their issue at the very low price fixed, would be advantageous to the Government as well. The elimination of the old patterns would permit the issue without further delay of the new standard shoe, according to the orders prescribed, which contemplate its issue.

PUBLIC ANIMALS.

Shortage of public animals in a number of posts and commands has been reported. The shortage does not appear to be due to indisposition in any quarter to supply them promptly, but to the fact that

it is apparently becoming a matter of more or less difficulty to procure a sufficient number of suitable animals to meet the requirements of the service.

A very large majority of the reports show that favorable results have been obtained from feeding and watering the animals three times a day. In view of this fact, it is believed that the promulgation of orders requiring all public animals to be fed and watered three times a day would be advisable.

REMOUNTS.

For several years after the establishment of a remount depot at Fort Keogh, Mont., there was a good deal of complaint from various sources in the West that the horses supplied therefrom were not desirable. It has been stated in explanation of this that in the beginning the horses were purchased for the purpose of getting the horse breeders of that section interested, so that they would ultimately produce a type of horse in every way suitable for cavalry purposes. The horses now being shipped from the depot are a great improvement over those of the first shipments and the 3 and 4 year olds now on hand, eventually to be shipped, are of a still higher grade.

The chief complaints about the remount system are as follows: 1, excessive cost; 2, issued too young; 3, those from Keogh not up to standard; 4, depots, though having ample capacity, do not maintain a sufficient number of remounts to meet the requirements of the service in peace.

An advantage not to be overlooked in connection with the maintenance of depots is that they may help to perpetuate the breeding of the types needed and will become collecting points of horses for the demands of war.

The training of remounts in organizations appears to be making satisfactory progress.

OFFICERS' MOUNTS.

It seems desirable that a descriptive card for officers' mounts should be prepared, which will show not only the general description, as does the present descriptive card for public animals, but the name of the officer who first purchased the horse as his mount, the name of the commanding officer who passed him, and the successive transfers and approvals. The history of an officer's mount frequently becomes obscure by reason of the animal passing from one owner to another, so that it is sometimes difficult to get the information now necessary for determining whether or not a horse is a "suitable mount." On changes of station the descriptive list should be sent to the commanding officer of the new station, who should make proper notations on it and send it to the quartermaster, who would then know whether or not he should issue forage for this particular animal.

WHEEL TRANSPORTATION.

For some time past there has been a distinct shortage of horses, mules, and wagons in the Army. The shortage of animals, it is

thought, is due to the difficulty in securing them at normal prices. This fact, and the constant improvement in the efficiency of motor trucks and automobiles, point to the necessity of supplementing wagon transportation by self-propelling vehicles. Therefore it is believed that the gradual introduction of the latter into use in our military service is necessary, and that now, while peace prevails, is the appropriate time to begin, as familiarity with their use will be imperative in time of war.

Recent reports from the Philippine Department on the use of the autotrucks of the Quartermaster Corps in the field inspections held during the year clearly corroborate the claim that they are necessary, economical, and essential as a vehicle of Army transportation for troops in the field on the line of supply.

The number of spring wagons for purely post transportation is generally in excess of the allowance prescribed in Army Regulations.

POST OFFICERS.

It frequently happens that the business of a post, especially when garrisoned by one battalion, the supply of troops and upkeep of buildings and grounds, are placed in the hands of a second lieutenant, an officer of very limited service. Many of these young officers acquit themselves most creditably; still, such work when practicable should be assigned to experienced officers. These important duties of supply, which frequently require that independent judgment which comes from experience, are given to officers of the junior grade, while administrative duties under the immediate supervision of the commanding officer and requiring practically no independent action are given to officers of the senior grade. This is a defect in organization which requires remedy.

SIGNALING.

Signaling by the Cavalry and Infantry with the authorized visual equipment has never been satisfactory in the service. It is difficult to learn, easy to forget, and its slowness and great liability to inaccuracy, as well as the ever-present probability of its being interpreted by the enemy, unite in rendering it unreliable. The semaphore system is easy to learn and remember, speedy, and accurate. It is said to be practicable to make 50 per cent of a company expert in its use, whereas it has heretofore been difficult to get even one or two expert men in a company. The ease of acquiring and retaining expertness enables men to use the two-arm semaphore system among themselves for their own convenience as occasion may require, and it is evident that when almost any soldier can send messages to almost any other soldier with speed and accuracy and with the certainty of being correctly interpreted information can be quickly transmitted in any direction.

Reports received confirm this opinion and show that Cavalry and Infantry troops have not demonstrated the ability to communicate by flags that is necessary for field duty, but that the Field Artillery troops have been able to very successfully utilize the semaphore code

authorized by General Orders, No. 15, War Department, 1913, and communicate at a distance greater than a mile with accuracy and at a very rapid rate. It is believed that this system is well adapted for use by the Cavalry and Infantry troops also, at short distances.

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PUBLIC FUNDS.

Inspections show that generally the laws and regulations have been carefully observed in the management of public funds, which have been efficiently administered.

The present form of check book has been found to be unsatisfactory. It is believed that each sheet of checks should be supplied with a duplicate carrying the printed number and other identifying marks of the original, on which a carbon record of the check issued should be kept. At present the inspector has no assurance that the records made on the register of checks are identical with the original checks issued.

COMPANY FUNDS.

A large number of inspections of such funds has developed the fact that the cash on hand and the value of property bought from the fund vary greatly in different organizations; that in some cases these funds greatly exceed the wants and needs of the organization; that organization commanders are sometimes too much occupied in business and financial transactions to give the attention required for the development of the military efficiency of their commands; that the difference in the number of luxuries enjoyed by two organizations of the same command, due to differences in the value of the company funds, tends toward discontent and discrimination in the treatment of enlisted men in the same command; that the large funds accumulated in the manner indicated are not and can not be expended for the benefit of the enlisted men who accumulated such funds, due to their separation from the organizations.

The possession of large amounts of property by organizations of the mobile Army has the additional objection of requiring the expense of transportation, or the storage of same when troops are ordered to take the field, or upon change of station; and additional care is thrown upon the organization commander, who is already responsible for large quantities of Government property.

Inspectors general have been directed to investigate the entire subject and make recommendations with respect thereto.

BUSINESS METHODS OF STAFF DEPARTMENTS.

The business management of the various staff departments appears to be satisfactory:

REQUISITIONS.

Inspection reports show a good deal of complaint about delay in getting requisitions filled and the articles forwarded. These com-

plaints relate principally to requisitions for quartermaster property of various kinds, but some of them relate also to requisitions for ordnance and ordnance stores, medical stores, etc. Investigation showed that a frequent cause of delay was due to the necessity of returning the requisitions from depots to posts for information necessary to properly fill them.

PAPER WORK.

Inspectors report that with few exceptions paper work at posts is being kept down, post commanders, as a general rule, carrying on post business by personal interviews and brief memoranda, rather than by letters, etc.

It is recommended that at small posts the filling out and filing of record cards be not required. The index cards and document file are ample, and the record cards make just so much unnecessary work.

From the Philippines comes the report that envelope, form 410, is too small to contain several record cards (with accompanying papers) pertaining to the subject; that document file, form 411, is too small for many documents with inclosures, and has to be cut and used as a wrapper; and that forms 410 and 411 should be made with bellows edges, as well as in the shape now issued, so as to meet these defects. It is so recommended.

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TRANSPORTS.

The transports at the base and port of embarkation, Galveston, Tex., are reported as deficient in life-saving appliances, boats, and rafts; but that they are otherwise prepared to receive and transport troops in safety and with reasonable comfort, being clean, well painted, and sanitary.

COOKS AND BAKERS TRAINED AT SERVICE SCHOOLS.

The results of the instruction which cooks and bakers receive at the service schools are having their effect now in the service in the improvement in company messes. A great fault of company cooks in the past has been wastefulness. This fault is checked at the schools for bakers and cooks and the men are taught how to make savory dishes out of material that was formerly wasted and went into the garbage can. The result is that the troops now have larger funds, are better fed, and purchase from the company funds various articles for their amusement, comfort, and enjoyment, which 20 years ago were unknown among them.

COOKS FOR REGIMENTAL DETACHMENT.

Attention has been called to the fact that, as at present organized, a regimental infantry detachment consists of 53 men, but the organi-

zation does not provide a cook. It seems desirable that a cook be added to the organization and that legislative action be sought to have the regimental detachment made a separate organization.

E. A. GARLINGTON.

REPORT OF THE JUDGE ADVOCATE GENERAL.

OCTOBER 15, 1913.

SIR: I submit the following annual report of the Judge Advocate General's Department for the year ending June 30, 1913:

Number of trials by general courts-martial.

Commissioned officers		33
Convictions approved	25	
Convictions disapproved	1	
Acquittals approved	2	
Acquittals wholly disapproved	4	
Awaiting action of War Department	1	
Cadets		7
Convictions approved	5	
Convictions wholly disapproved	1	
Acquittals approved	1	
Enlisted men		5,121
Convictions approved	4,755	
Convictions wholly disapproved	70	
Acquittals approved	271	
Acquittals wholly disapproved	25	
General prisoners		48
Convictions approved	46	
Convictions wholly disapproved	1	
Acquittals approved	1	
Total		5,209

The statistics as to trials by general courts-martial in recent years are as follows:

	1907	1908	1909	1910	1911	1912	1913
Commissioned officers tried	32	28	43	30	42	29	33
Cadets tried	2	1	2	4	5	10	7
Enlisted men tried	3,763	3,994	5,449	5,127	3,756	4,343	5,121
General prisoners tried	45	52	56	45	48	53	48
Commissioned officers dismissed	4	3	10	7	6	6	8
Cadets dismissed				2		6	2

The number of trials of enlisted men by general courts-martial was 6 per cent of the average enlisted strength of the Army in 1907, 6.2 per cent in 1908, 7.4 per cent in 1909, 6.98 per cent in 1910, 5 per cent in 1911, 5.2 per cent in 1912, and 5.8 per cent in 1913.

Additional general court-martial statistics.

Charges received recommending trial by general courts-martial	5,546
Charges referred for trial by general courts-martial	5,193
Charges returned for trial by inferior courts-martial	215
Charges upon which no trial ordered	138
Defective charges requiring amendment before reference	2,117
Cases in which proceedings returned for revision	397
Enlisted men dishonorably discharged as result of trial	2,653
Above cases in which dishonorable discharge was authorized only because of five previous convictions	412
Amount paid enlisted men as reporters	$202.99

Number of trials by inferior courts-martial.

	Summary.			Garrison.			Regimental.		
	Convicted.	Acquitted.	Total.	Convicted.	Acquitted.	Total.	Convicted.	Acquitted.	Total.
Enlisted men	38,702	1,023	39,725	189	47	236	41	7	48
General prisoners	92	3	95	8	.....	8	.....	.....	.....

CLASSIFICATION OF OFFENSES TRIED BY ALL COURTS-MARTIAL.

The following table shows the number of approved convictions of different offenses by all courts-martial, classified according to the nature of the offense.

Article of war.	Description of offense.	Number of convictions.		
		Officers.	Enlisted men.	General prisoners.
	Offenses relating to public property:			
16	Wasting ammunition	.....	5	.....
17	Selling clothing and accouterments	.....	180	.....
17	Losing or spoiling horse or arms	.....	56	.....
17	Losing or spoiling accouterments or clothing	.....	520	.....
62	Abusing public animals	.....	217	2
62	Pawning and disposing of clothing	.....	63	.....
62	Losing arms, accouterments, stores, or other property	.....	170	.....
62	Destroying or spoiling public property	.....	60	6
	Other offenses relating to public property under sixty-second article of war	1	240	.....
	Offenses against constituted authority:			
20	Disrespect to commanding officer	.....	47	.....
21	Disobeying superior officer	1	132	.....
21	Offering violence to superior officer	.....	3	.....
24	Disobeying noncommissioned officer while quelling frays, etc.	.....	5	.....
62	Disobedience of standing orders or regulations	1	4,376	23
62	Disobedience of or failure to obey commissioned officer	.....	961	.....
62	Disobedience of or failure to obey noncommissioned officer	.....	3,070	7
62	Disobedience of or failure to obey sentinel	.....	87	.....
62	Disrespect or insulting language or insubordinate conduct toward a commissioned officer	3	296	2
62	Disrespect or insulting language or insubordinate conduct toward a noncommissioned officer	.....	2,606	20
62	Disrespect or insulting language or insubordinate conduct toward a sentinel	.....	120	5
62	Resisting arrest by military authorities	.....	126	.....
62	Breach of arrest	.....	1,541	.....
62	Escape or conspiring to escape from confinement or sentinel	.....	106	37
62	Other offenses against those in authority	4	573	13
	Offenses against subordinates:			
62	Abuse by officer or noncommissioned officer of authority over a subordinate	.....	23	.....
	Conduct unbecoming an officer and a gentleman:			
61	Financial irregularities	3	.....	.....
61	Other irregularities	3	.....	.....
62	Fraudulent enlistment	.....	300	.....
62	Carrying concealed weapons	.....	18	1

Article of war.	Description of offense.	Number of convictions.		
		Officers.	Enlisted men.	General prisoners.
	Offenses by guards:			
39	Leaving post		80	
39	Sleeping on post		121	
40	Quitting guard		121	
62	Sentinel allowing a prisoner to escape		64	
62	Sentinel sitting down on post		158	
62	Sentinel permitting prisoner to obtain intoxicating liquor		18	
62	Other offenses committed by sentinels or others on guard in connection with such duty		1,117	
	Offenses of violence:			
62	Threats to kill or injure		79	1
62	Assault with dangerous or deadly weapon		53	
62	Assault with intent to do bodily harm	1	75	4
62	Assault with intent to kill		15	
62	Assault, or assault and battery and other offenses of violence not against one in authority, or otherwise classified under this subhead	1	495	12
62	Manslaughter		3	
	Offenses involving personal dishonesty:			
60	Embezzlement or misappropriation	1	8	
60	Forgery			
60	Larceny		124	2
60	Making or presenting false claims	4		
60	Wrongful acquirement or disposition of Government property		47	
62	Failure to pay debts		101	
62	Failure to return borrowed property		9	
62	Selling, pawning, or otherwise disposing of borrowed property		9	
62	Forgery and uttering forged papers	5	31	
62	Fraudulent financial transactions	5	64	
62	Larceny		383	
62	Embezzlement		1	
62	Robbery		4	1
62	Burglary		9	1
62	Obtaining money under false pretenses		31	
62	Other offenses under the sixty-second article of war involving personal dishonesty of the offender	1	341	
	Unauthorized absences:			
31	Lying out of quarters		32	
32	Absence without leave		15,679	
33	Failure to attend roll call, etc		8,069	
34	1 mile from camp without leave		2	
47	Desertions	1	1,205	
62	Absence without leave or from duty	2	2,556	
	Offenses closely connected with military duty:			
62	Careless handling or discharge of firearms		205	
62	False official statement or report	2	931	1
62	Impersonating superior officer or sentinel		2	
62	Refusing to submit to surgical operation or medical treatment		36	
62	Malingering		3	
62	Sleeping while on duty		44	
62	Other neglects of duty not classified under this subhead	19	3,086	15
	Offenses connected with intoxicating liquor:			
38	Drunkenness on duty		2,190	
62	Drunkenness at post or in quarters	6	3,034	8
62	Drunkenness and disorderly conduct at post		1,954	4
62	Drunkenness and disorderly conduct causing offender's arrest and conviction by civil authorities		315	
62	Having possession of, selling, or buying intoxicating liquor		170	2
62	Introducing liquor into camp, quarters, etc		667	2
	Other offenses connected with intoxicating liquor and not otherwise classified under this subhead	8	2,264	21
	Offenses against decency:			
62	Committing nuisance		538	
62	Indecent conduct and exposure		29	6
62	Sodomy and other unnatural practices		41	
62	Rape			
62	Other similar offenses		39	
	Conduct (not involving drunkenness) causing arrest and conviction by civil authorities		142	
62	Loaning money at usurious rates of interest		6	
62	Offenses not otherwise classified	8	1,560	3

Trials by summary courts.[1]

Posts.	Average of enlisted strength present on last day of each month.	Total number of trials by summary courts during year.	Percentage of trials by summary courts during year.
Adams, Fort, R. I.	508	241	48
Andrews, Fort, Mass.	406	303	75
Apache, Fort, Ariz.	154	57	37
Armstrong, Fort, Hawaii	84	3	3
Army and Navy General Hospital, Ark.	66	41	62
Baker, Fort, Cal.	326	182	55
Banks, Fort, Mass.	235	130	56
Barrancas, Fort, Fla.	517	127	25
Barry, Fort, Cal.	188	76	40
Bayard, Fort, General Hospital, N. Mex.	218	117	53
Benjamin Harrison, Fort, Ind.	545	373	68
Bliss, Fort, Tex.	616	761	123
Boise Barracks, Idaho	148	99	66
Brady, Fort, Mich.	161	67	41
Casey, Fort, Wash.	305	36	11
Caswell, Fort, N. C.	298	159	52
Clark, Fort, Tex.	366	160	43
Columbia, Fort, Wash.	104	44	42
Columbus Barracks, Ohio	1,039	413	39
Constitution, Fort, N. H.	130	78	60
Crockett, Fort, Tex.	213	84	40
Crook, Fort, Nebr.	349	188	53
Dade, Fort, Fla.	201	87	43
D. A. Russell, Fort, Wyo.	1,321	518	39
Davis, Fort, Alaska	139	106	76
De Russy, Fort, Hawaii	154	51	33
Des Moines, Fort, Iowa	458	322	70
Douglas, Fort, Utah	769	575	74
Du Pont, Fort, Del.	475	157	33
E. S. Otis, Camp, Canal Zone	784	451	58
Ethan Allen, Fort, Vt.	776	459	59
Flagler, Fort, Wash.	289	130	44
George Wright, Fort, Wash.	526	345	65
Gibbon, Fort, Alaska	291	63	21
Greble, Fort, R. I.	297	157	53
Hamilton, Fort, N. Y.	517	191	37
Hancock, Fort, N. J.	597	307	52
Henry Barracks, P. R.	140	57	41
H. G. Wright, Fort, N. Y., and Terry, Fort, N. Y.	1,195	484	41
Howard, Fort, Md.	417	218	52
Huachuca, Fort, Ariz.	554	193	34
Hunt, Fort, Va.	109	73	65
Jackson Barracks, La., and St. Philip, Fort, La.	227	56	25
Jay, Fort, N. Y.	380	245	64
Jefferson Barracks, Mo.	1,050	306	21
Kamehameha, Fort, Hawaii	201	43	29
Key West Barracks, Fla.	125	82	66
Lawton, Fort, Wash.	354	216	61
Leavenworth, Fort, Kans.	1,339	758	56
Lincoln, Fort, N. Dak.	145	84	57
Liscum, Fort, Alaska	147	26	17
Logan, Fort, Colo.	535	153	28
Logan H. Roots, Fort, Ark.	279	265	94
McIntosh, Fort, Tex.	220	195	88
McKinley, Fort, Me.	679	310	46
McPherson, Fort, Ga.	796	391	49
Mackenzie, Fort, Wyo.	360	198	55
Madison Barracks, N. Y.	567	385	68
Meade, Fort, S. Dak.	474	320	67
Miley, Fort, Cal.	167	106	63
Missoula, Fort, Mont.	156	128	77
Monroe, Fort, Va.	963	296	31
Morgan, Fort, Ala.	324	139	43
Mott, Fort, N. J.	207	61	29
Moultrie, Fort, S. C.	433	198	46
Myer, Fort, Va.	739	590	80
Niagara, Fort, N. Y.	245	155	63
Oglethorpe, Fort, Ga.	790	528	67
Omaha, Fort, Nebr.	234	94	40
Ontario, Fort, N. Y.	295	205	69
Plattsburg Barracks, N. Y.	755	497	66
Porter, Fort, N. Y.	250	114	46

[1] This table does not include 3,039 cases tried at places where the statistics are not available for determining percentages.

Trials by summary courts—Continued.

Posts.	Average of enlisted strength present on last day of each month.	Total number of trials by summary courts during year.	Percentage of trials by summary courts during year.
Presidio of Monterey, Cal.	981	370	37
Presidio of San Francisco, Cal.	2,007	851	42
Presidio of San Francisco, Letterman General Hospital, Cal.	156	150	96
Riley, Fort, Kans.	1,093	588	53
Robinson, Fort, Nebr.	583	327	56
Rock Island Arsenal, Ill.	133	26	19
Rodman, Fort, Mass.	125	73	59
Rosecrans, Fort, Cal.	200	109	54
Ruger, Fort, Hawaii.	222	190	85
St. Michael, Fort, Alaska.	136	31	22
Sam Houston, Fort, Tex.	1,047	626	59
San Juan, P. R.	447	94	21
Schofield Barracks, Hawaii.	2,813	1,181	42
Screven, Fort, Ga.	433	138	32
Shafter, Fort, Hawaii.	599	409	68
Sheridan, Fort, Ill.	887	656	73
Sill, Fort, Okla.	885	540	61
Snelling, Fort, Minn.	791	553	69
Stevens, Fort, Oreg.	292	188	64
Strong, Fort, Mass.	376	235	63
Totten, Fort, N. Y.	608	352	58
United States Army transports to San Francisco, Cal.		49	
United States military prison, Fort Leavenworth, Kans.	181	206	113
Vancouver Barracks, Wash.	1,431	702	49
Wadsworth, Fort, N. Y.	226	105	46
Ward, Fort, Wash.	124	91	75
Warren, Fort, Mass.	200	99	50
Washington Barracks, D. C.	503	207	51
Washington, Fort, Md.	464	259	56
Wayne, Fort, Mich.	361	149	41
William Henry Harrison, Fort, Mont.	219	96	43
William H. Seward, Fort, Alaska.	351	136	38
Williams, Fort, Me.	523	286	55
Winfield Scott, Fort, Cal.	1,012	478	46
Wood, Fort, N. Y.	60	15	25
Worden, Fort, Wash.	579	280	48
Yellowstone, Fort, Wyo.	362	125	34
Camp at Sparta, Wis.	2,706	145	5
PHILIPPINE ISLANDS.			
Augur Barracks.	872	427	49
Camp Avery.	507	74	14
Camp Bumpus.	52	6	11
Camp Connell.	228	27	11
Camp Downs.	123	23	18
Camp Eldridge.	440	237	53
Camp Gregg.	1,203	127	10
Camp John Hay.	214	137	64
Camp Keithley.	529	369	69
Camp McGrath.	732	425	58
Camp Overton.	194	222	114
Camp Stotsenburg.	1,259	798	63
Camp Ward Cheney.	254	34	13
Cotabato.	72	6	8
Davao.	76	2	2
Fort Mills.	1,447	171	11
Fort San Pedro.	160	26	16
Fort William McKinley.	2,929	1,824	62
Fort Wint.	203	92	45
Isabela.	45	8	17
Ludlow Barracks.	465	246	52
Manila:			
Cuartel de Espana.	809	253	31
Division hospital.	139	58	41
Ordnance depot.	51	4	7
Momungan.	54	18	33
Pettit Barracks.	289	211	73
Puerto Princesa.	164	22	13
Regan Barracks.	258	81	31
Tientsin.	935	601	64
Torry Barracks.	261	87	33
Warwick Barracks.	99	27	27
Miscellaneous stations, camps, etc.	450	122	21
United States Army transports to Manila.		36	

Trials by summary courts—Continued.

Posts.	Average of enlisted strength present on last day of each month.	Total number of trials by summary courts during year.	Percentage of trials by summary courts during year.
SECOND DIVISION.			
Headquarters Second Division	9		
Headquarters and Companies E, G, and H, Second, and Company M, Third Battalion Engineers	514	78	15
Company D, Signal Corps; First Aero Squadron; detachment Company B, Signal Corps	172	31	18
Field Hospital No. 3	57	23	40
Ambulance Company No. 3	50	4	8
Sixth Cavalry	875	201	22
Fourth Field Artillery	756	193	26
Fourth Infantry	836	203	24
Seventh Infantry	889	203	22
Eleventh Infantry	796	112	14
Eighteenth Infantry	704	160	23
Nineteenth Infantry	909	214	23
Twenty-second Infantry	819	149	18
Twenty-third Infantry	920	106	11
Twenty-sixth Infantry	813	147	18
Twenty-seventh Infantry	827	240	29
Twenty-eighth Infantry	839	176	21
Field bakery No. 2	46	1	2
Pack trains Nos. 3, 6, 9	27		
Eastern Department	20,233	10,395	51
Central Department	15,244	8,500	55
Western Department	16,230	6,886	42
Southern Department	3,624	1,080	30
Hawaiian Department	4,598	878	19
Philippine Department	15,513	6,801	43
Second Division	10,860	2,241	20

The total number of summary court trials during the year was 39,820. This is an increase of 2,408 as compared with last year. The number of trials by summary court this year was 46 per cent of the average enlisted strength of the Army as against 45 per cent in 1912, 43 per cent in 1911, 57 per cent in 1910, 64 per cent in 1909, and 69 per cent in 1908. The fact that there has been a marked reduction in trials since 1908, and that the percentage has remained for three consecutive years under 50 per cent, indicates that the service is relying more upon the authorized company discipline.

DESERTION.

Statistics of trials for desertion for the four fiscal years preceding July 1, 1913, are set forth below:

	1910	1911	1912	1913
Tried for desertion	1,743	1,347	1,577	1,896
Tried for desertion, but convicted of absence without leave only and retained in the service	400	293	414	457
Tried for desertion, but convicted of absence without leave only and dishonorably discharged	130	101	117	169
Convicted of desertion and not dishonorably discharged	38	14	98	163
Convicted of desertion and dishonorably discharged	1,169	932	944	1,107

The above table does not specifically set out the number tried for desertion and acquitted, and it does not include cases of desertion where action other than trial by court-martial has been taken.

General Order No. 77, War Department, June 10, 1911, announced the policy of the War Department as to the proper punishment for the offense of desertion in cases of inexperienced soldiers who desert in the earlier periods of their enlistment contracts, and as well for the surrendered deserter. Disciplinary punishment by confinement and forfeiture was therein suggested as an appropriate punishment for such of these men as show a disposition to atone for their offenses and the cooperation of reviewing authorities was invited in carrying out the new policy.

The order was issued near the close of the fiscal year 1911 and so does not materially affect the statistics of that year. The execution which the order has received is very clearly revealed by comparing the number of soldiers convicted of desertion who were retained in the service for the two years preceding the issue of the order with the number so retained during the two years following the order. For the former years (1910 and 1911) these numbers were 38 and 14, respectively, the corresponding percentages to the total number of soldiers tried and convicted of desertion being 3 per cent and 2 per cent. For the latter years (1912 and 1913) the number of convicted deserters retained in the service rose to 98 and 163, respectively, the corresponding percentages being 10 and 13. While the percentage increase of men saved to the colors through the operation of this order has been most marked, the numbers actually restored continue small in comparison with the total number convicted of this offense and dishonorably discharged. Whether this percentage will increase for future years depends, of course, on the record of service of the deserters who have been retained.

GENERAL ORDER NO. 56, SEPTEMBER 17, 1913.

The complement of the statistics respecting convicted deserters retained in the service is found in the column of the foregoing table, "Convicted of desertion and dishonorably discharged." The number of these latter for the four fiscal years 1910, 1911, 1912, 1913 are, respectively, 1,169, 932, 944, and 1,107, the percentages for these years being, respectively, 97, 98, 90, and 87. These men, along with others convicted by court-martial of offenses other than desertion and dishonorably discharged (excepting felons) constitute our prison population, and it is with them that General Order No. 56, War Department, September 17, 1913, deals. The order recognizes two classes of prisoners confined in our military prisons: One, soldiers convicted of offenses against the discipline of the Army—purely military offenders—and the other, those convicted of acts of moral turpitude. It provides for the separation of these classes in their prison life, and that from the date of notice thereof soldiers convicted of offenses punishable by penitentiary confinement shall be sent to the penitentiaries, leaving for confinement in military prisons those convicted of purely military offenses or of such offenses in connection with misdemeanors. The further provisions of the order may be summarized as follows:

Those men convicted of purely military offenses alone, whose prison conduct places them in the first class, are made eligible for membership in companies and battalions to be organized and equipped as infantry under the command of officers to be detailed from the active list, with noncommissioned officers similarly detailed or specially

enlisted for the service. Prisoners admitted to these companies are to undergo rigid military training and instruction during one half of each working day, and hard labor during the other half. The military training provided by the order is required to be intensely practical, the object being to make the men efficient soldiers from the date of rejoining the service, and includes target practice, instruction in hasty intrenchments, signalling, bayonet and saber drill, and extensive gymnasium training. Upon being enrolled in these organizations prisoners cease to be designated by number, and their prison garb is replaced by a uniform, differing materially, however, from the service uniform. It will result from these provisions that such prisoners as are restored to the colors will go back, not as men who have worn stripes or numbers—that is, as convicts who have done penal servitude—but as men who have been subjected to a special and rigid régime of military instruction and training, the purpose of which is to supply them with new standards of conduct and to enable them to render efficient service from the moment of rejoining. The new system will afford an opportunity to study more closely the question of the expediency and propriety of restoring to the colors men who have made one serious mistake. It is an essential part of the scheme that the conduct of the men so restored shall be carefully watched and reported upon after their return to the service. Final expression of opinion upon the question of the propriety of returning men of this class to the ranks should be deferred until experience has been had in the development of the scheme.

ACT OF AUGUST 22, 1912.

This act carried the provision that the provisions of section 1118, Revised Statutes, that no deserter from the military service of the United States shall be enlisted or mustered into the military service, and the provisions of section 2 of the act of Congress approved August 1, 1894, which provided that no soldier shall be again enlisted in the Army whose service during the last preceding term of enlistment has not been honest and faithful, shall not be construed to preclude the reenlistment or muster into the Army of any person who has deserted, or may hereafter desert, from the military service of the United States in time of peace, or of any soldier whose service during his last preceding enlistment has not been honest and faithful, whenever the reenlistment or muster into the military service of such person or soldier shall, in view of the good conduct of such person or soldier subsequent to such desertion or service, be authorized by the Secretary of War. Under the authority of this section this office has recommended for reenlistment 22 men convicted of the following offenses: Desertion, 16; disobedience of orders, 2; fraudulent enlistment, 2; trespass and assault, 2. In three cases favorable recommendation was withheld for the reason that the soldier had been found guilty of offenses involving moral turpitude, and in one case because the man's conduct in confinement had been bad. Of the 16 deserters whose reenlistment was recommended it appears that only 6 have thus far availed themselves of the authority granted, and of these 6 one has since deserted. The legislation under the terms of which these reenlistments have been authorized is in harmony with the organic prison act of March 3, 1873, section 6 of which (R. S., 1352) authorizes the Secretary of

War to remit in part the sentences of convicts confined in the military prison and to give them "an honorable restoration to duty in case the same is merited."

The act of August 22, 1912, further provided for the remission of the loss of the rights of United States citizenship which had been attached by operation of law upon conviction of desertion, but remission was authorized only in cases of desertion committed in time of peace, in which clemency would not be prejudicial to the public interests. Three hundred and twenty-one applications for the remission of the loss of the rights of citizenship were received during the fiscal year, and favorable recommendation was made in 307 cases. Unfavorable recommendations were made in 14 cases—in 11 because the prisoners applying had been convicted of offenses involving moral turpitude in addition to the offense of desertion, and in the remaining 3 because of bad conduct of the prisoners while in confinement.

FRAUDS ON THE RECRUITING SERVICE.

A number of cases have occurred in the last few years where applications for enlistment have been made by men at recruiting stations for the purpose of obtaining subsistence and transportation to the recruiting depots, the applicant upon arrival at such depots declining to enlist. With a view to breaking up this practice, men have been prosecuted under section 5439 of the Revised Statutes (now sec. 36 of the criminal code of Mar. 4, 1909; 35 Stat., 1096). In a number of these cases the efforts resulted in the conviction of the offender. But during the last three years some courts have refused to convict on the ground that the penal clause of section 36 is indefinite and uncertain. A proposed bill to correct the defect has been presented to Congress and it is hoped it will soon become a law.

MILITARY LEGISLATION.

During the fiscal year ended June 30, 1913, this office examined and reported upon 90 legislative propositions. Much of the proposed legislation was modified from time to time and was referred to this office more than once, thus requiring two or more reports upon the same project or modification thereof. The number of original or supplementary reports rendered during the year was 145.

Of the projects of legislation prepared in this office the one of greatest importance, affecting directly the administration of military justice, is the revision of the Articles of War, which was introduced in both Houses of the Sixty-second Congress (2d sess.) by the chairmen of the Senate and House Military Committees. The House committee had several hearings to consider the project. No material objection to the proposed revision was developed at these hearings. Certain minor amendments were proposed, which could be accepted by the War Department. Notwithstanding the general favor with which the project was received by members of the House Military Committee participating in the hearing, and the recognition by them that revision was urgently needed, the bill, because of the urgency of the general legislative program, was not reported out of the committee and thus failed of consideration by the House. Similar reasons prevented the reporting of

the bill by this committee during the third session of the Sixty-second Congress, but the Senate committee during that session reported nine articles of the proposed revision—those relating to the organization, composition, and jurisdiction of courts-martial. These were enacted as a part of the Army appropriation bill for the fiscal year ending June 30, 1914 (act Mar. 2, 1913), and went into effect July 1, 1913, with the exception of the article conferring more ample powers as to the convening of courts-martial, which was made effective from the date of the passage of the act. Shortly after the convening of the Sixty-third Congress the project, revised to incorporate the amendments proposed in the course of the hearings before the House Military Committee, was again introduced, this time by the chairman of the Senate Military Committee, and is now pending as S. 1032. The chairman has appointed a subcommittee to hold hearings and make a report upon the project, but it is understood that the urgency of the general legislative situation will require a postponement of hearings by the subcommittee until after the opening of the regular session, in December.

DELAYS IN GENERAL COURT-MARTIAL TRIALS.

The average period of delay between the arrest of a soldier under charges and his entry upon the execution of his sentence was made the subject of special comment in the last annual report. The statistics have been compiled again for the fiscal year of 1913, and a comparison between them and the statistics of 1912 is set forth below. (No statistics are available for prior years.)

1912.		1913.	
Eastern Division	48	Eastern Department	47
Central Division	48	Central Department	48
Western Division	44	Western Department	40
Philippine Division	25	Southern Department	44
		Hawaiian Department	36
		Philippine Department	38
		Second Division	28

The averages stated in the above table are higher than they should be. As far as investigation has proceeded the principal cause of delay is the taking of depositions. Statistics compiled in the Southern Department for a part of the fiscal year confirm this view. With a view to abridging this delay, the procedure as to taking depositions has been modified by Changes in the Manual for Courts-Martial, No. 2, April 21, 1913, so as to authorize depositions to be sent direct to a post commander where the witnesses whose depositions are sought reside at or near a post, thus avoiding the loss of time occasioned by sending these depositions through regular channels.

The statistics collected in this same department show further that the time consumed in preferring charges and making investigations is almost twice as great at large posts as at small ones. No reason is known why this should be the case. With the new procedure provided in the proposed revision of the Articles of War, I am satisfied that a further and substantial reduction of these average periods can be brought about.

E. H. CROWDER,
Judge Advocate General.

REPORT OF CHIEF OF THE QUARTERMASTER CORPS.

WAR DEPARTMENT,
OFFICE CHIEF OF THE QUARTERMASTER CORPS,
Washington, October 15, 1913.

SIR: I have the honor to submit the annual report of the operations of the Quartermaster Corps for the fiscal year ending June 30, 1913.

QUARTERMASTER CORPS.

The provisions of section 3 of the Army appropriation act approved August 24, 1912, consolidating the office establishments of the Quartermaster General, the Commissary General, and the Paymaster General of the Army, and constituting a single bureau of the War Department, to be known as the "Quartermaster Corps," and the consolidation of the Quartermaster, Subsistence, and Pay Departments, to be known as the "Quartermaster Corps" of the Army, became effective on November 1, 1912, and the duties previously performed by the three separate departments were, from and after that date, discharged by the Quartermaster Corps, except such as pertained to the Philippine Department, where the consolidation became effective on January 1, 1913.

The consolidation was effected without delaying or interfering with the supply, service, and pay of the Army, notwithstanding the fact that approximately one-half of the 130 captains of the line detailed for duty with the Quartermaster Corps were relieved from such detail by the operation of law requiring two years' duty with troops in each preceding six years.

After eight months' operation of the Quartermaster Corps the records of this office show that a considerable saving has already been made in a majority of the appropriations disbursed for current requirements without any loss in efficiency, and that, although it is impracticable to submit a comparative statement of cost because of the short time under consideration, it is now apparent that the consolidation is a success, and that savings will even exceed the estimates previously made in hearings before the Military Committee of Congress.

PERSONNEL.

Commissioned.—The act of August 24, 1912, consolidated the Quartermaster, Subsistence, and Pay Departments and created the Quartermaster Corps of the Army, the commissioned strength being fixed at—

Major general	1
Brigadier generals	2
Colonels	12
Lieutenant colonels	18
Majors	48
Captains	102
Total	183

The authorized commissioned strength of the three separate departments when consolidated was as follows:

	Brigadiers general.	Colonels.	Lieutenants colonel.	Majors.	Captains.	Total.
Quartermaster	1	8	12	27	78	126
Subsistence	1	3	4	9	27	44
Pay	1	3	4	20	25	53
Total	3	14	20	56	130	223

A reduction of 2 colonels, 2 lieutenants colonel, 8 majors, and 28 captains is required by the act, which provides that no details to fill vacancies in these grades shall be made until the number of officers is reduced as above indicated.

On June 30, 1913, the number of captains had been reduced to 102 and the number of majors to 53.

One vacancy existed in the grade of lieutenant colonel, the number of colonels remained unchanged, and the total commissioned personnel was 204. It is expected that the 5 remaining surplus majors will have been absorbed by January, 1914. All of the 102 captains and 19 of the majors were detailed from the line for service in the Quartermaster Corps.

Attention is invited to the necessity of instruction for quartermasters which has been pointed out in former annual reports of the Quartermaster General. In 1907 the following recommendation was made:

The present excellent courses of study at the Infantry and Cavalry School and Staff College at Fort Leavenworth undoubtedly offer a very valuable and fundamental training for officers for service in the Quartermaster's Department. The course in engineering in the Infantry and Cavalry School and the practical exercise in performing staff duties involving details of transportation of large bodies of troops obtained in the military art exercises in the Staff College furnishes a superior foundation of instruction for officers for service in this department. There is, however, an urgent need for officers specially trained in the construction of buildings; or water, sewer, and electric lighting systems; the installation of modern heating apparatus; in textiles and leather; and the process of manufacture of clothing, hats, shoes, etc.; also in details of transportation by land and water. In addition, there should be general instructions to the administrative work of the department, and the preparation of papers pertaining thereto, especially contracts and bonds. It is hoped that some practical scheme may be devised for the selection and instruction at the service schools at Fort Leavenworth of a limited number of specially qualified officers with a view to their detail to fill vacancies in the Quartermaster's Department.

In 1911 the following recommendation was made:

Instruction in quartermaster's duties for officers.—This subject was mentioned in the annual report of the Quartermaster General for the years 1907, 1908, and 1909. It is of great importance and is therefore again brought to notice. To expect a second lieutenant, with two years' commissioned service, who by virtue of his appointment as squadron or battalion quartermaster becomes post quartermaster of a battalion post, to at first properly conduct the business is an optimistic dream which will rarely be realized. The lack of instruction in the details and ramifications of the Quartermaster's Department, previous to entering upon the duties of post quartermaster, in such cases, usually is met by the young officer being initiated into his work by the post quartermaster sergeant or civilian clerk and results in a correspondence school for his instruction being conducted by the office of the Quartermaster General and Chief Quartermaster of Division while he is being thus educated in his duties. In the meanwhile the interests of the Government, and those dependent upon him for proper supply, suffer.

It is recommended that all lieutenants be required to take a prescribed course in the garrison school concerning quartermaster's duties, which subject is now covered, in a general way, under the head of "Administration," the regimental quartermaster or other experienced officer to be the instructor. The hope is again expressed that a plan may be devised for the selection and instruction, in the service schools, of a limited number of specially qualified officers with a view to their subsequent detail in the department.

An officer of the Quartermaster Corps should be equipped with a thorough knowledge of office administration and the functions of the Quartermaster Corps with reference to the organization of troops, their shelter and supply, in field and garrison; with their transportation by land and water; a thorough knowledge of animals, and the construction, lighting, heating, and ventilation of buildings, sanitary plumbing, and the construction of roads and bridges. This can only be accomplished by systematic study and it is thought that a course embracing such quartermaster work should be included in the garrison and service schools.

Enlisted.—The act of August 24, 1912, provides that "the noncommissioned officers now known as post quartermaster sergeants and post commissary sergeants, shall hereafter be known as 'quartermaster sergeants.'"

On July 1, 1912, the number of post quartermaster sergeants authorized was 200, and the number of post commissary sergeants authorized was 207. There are now in the service 404 quartermaster sergeants, Quartermaster Corps.

In the operation of section 3 of the act of August 24, 1912, 200 post quartermaster sergeants and 207 post commissary sergeants have become quartermaster sergeants in the Quartermaster Corps. The qualifications and methods of selection and appointment of post commissary sergeants and post quartermaster sergeants have heretofore been determined by the following statutory provisions, viz:

The Secretary of War is authorized to select from the sergeants of the line of the Army who shall have faithfully served therein five years, three years of which in the grade of noncommissioned officers, as many commissary sergeants as the service may require, not to exceed one for each military post or place of deposit of subsistence supplies, whose duty it shall be to receive and preserve subsistence supplies at the posts, under the direction of the proper officers of the Subsistence Department, and under such regulations as shall be prescribed by the Secretary of War. * * * (Sec. 1142, Revised Statutes.)

That the Secretary of War is authorized to appoint, on the recommendation of the Quartermaster General, as many post quartermaster sergeants, not to exceed 80, as he may deem necessary for the interests of the service, said sergeants to be selected by examination from the most competent enlisted men of the Army who have served at least four years, and whose character and education shall fit them to take charge of public property and to act as clerks and assistants to post and other quartermasters. Said post quartermaster sergeants shall, so far as practicable, perform the duties of storekeepers and clerks, in lieu of civilian employees. * * * (Act of July 5, 1884; 23 Stat., 109.)

The act of August 24, 1912, does not specifically provide for the repeal of any portion of section 1142, Revised Statutes, or of the act of July 5, 1884; neither does the former act in terms prescribe the qualifications and methods of selection and appointment of quartermaster sergeants in the Quartermaster Corps.

Bulletin No. 1, War Department, dated January 20, 1913, promulgates the following opinion of the Judge Advocate General of the Army in this matter:

Section 1142, Revised Statutes, provides for the selection of commissary sergeants from among the sergeants of the line who have served faithfully therein for five years,

three of which shall have been in the grade of noncommissioned officer. The act of July 5, 1884 (23 Stat., 109), provides for the appointment of post quartermaster sergeants upon the recommendation of the Quartermaster General, the same to be selected by examination from among the most competent enlisted men of the Army having at least four years' service, and whose character and education shall be such as to fit them to take charge of public property and to act as clerks and assistants to post and other quartermasters. Commissary sergeants were afterwards by law designated as post commissary sergeants and included in the Subsistence Department, and post-quartermaster sergeants were by law incorporated into the Quartermaster's Department. Section 3 of the Army appropriation act of August 24, 1912 (37 Stat., 591), consolidates the Quartermaster's, Subsistence, and Pay Departments of the Army into a single corps, to be known as the Quartermaster Corps, and changes the designations of post commissary sergeants and post quartermaster sergeants to quartermaster sergeants. It provides also that the duties now required by law to be performed by officers of said several departments shall hereafter be performed by such officers of the Quartermaster Corps as the Secretary of War may designate for that purpose. Held, that the consolidation of said departments into a single corps and the changing of the designation of said sergeants to that of quartermaster sergeant did not repeal the requirements regarding the appointment of said sergeants, respectively, and that in filling the position of quartermaster sergeant in the consolidated corps the requirements of both of said statutes with respect to the qualifications and methods of selection should be observed, adopting the higher qualifications and observing the more restricted field of selection when the two statutes contain different provisions upon the subject.

As the result of the consolidation and the application of both of the old statutes to determine the field from which new appointees to the position of quartermaster sergeant in the Quartermaster Corps may be selected is to render inelgible for appointment as quartermaster sergeants in the Quartermaster Corps all enlisted men below the grade of sergeant in the line of the Army and all grades of enlisted men who do not belong to the line of the Army, thus closing an avenue of advancement heretofore open to them, in so far as the 200 positions as post quartermaster sergeant were concerned.

It is thought that applicants for appointment as quartermaster sergeant, Quartermaster Corps, should be noncommissioned officers of the Army for three years and with at least five years' service in the Army, and selected from the most competent noncommissioned officers of the Army whose character and education should fit them to take charge of public property and act as assistants to the officer in charge of such property, which may be given legislative expression in substantially the following form:

That the Secretary of War is authorized to appoint such number of quartermaster sergeants, Quartermaster Corps, not to exceed the number provided for by law, as he may deem necessary for the interest of the service, said quartermaster sergeants to be selected from the most competent noncommissioned officers of the Army who shall have served therein at least five years, three years of such service having been rendered as noncommissioned officers, and whose character and education shall fit them to take charge of public property and to act as clerks and assistants to the proper officers of the Army in charge of public property.

Section 4 of the act approved August 24, 1912, provides:

That as soon as practicable after the creation of a Quartermaster Corps in the Army not to exceed 4,000 civilian employees of that Corps, receiving a monthly compensation of not less than $30 nor more than $175 each, not including civil engineers, superintendents of construction, inspectors of clothing, clothing examiners, inspectors of supplies, inspectors of animals, chemists, veterinarians, freight and passenger rate clerks, civil-service employees and employees of the classified service, employees of the Army transport service and harbor boat service, and such other employees as may be required for technical work, shall be replaced permanently by not to exceed an equal number of enlisted men of said corps, and all enlisted men of the line of the Army detailed on extra duty in the Quartermaster Corps or as bakers or assistant bakers shall be replaced permanently by not to exceed 2,000 men of said corps; and

for the purposes of this act the enlistment in the military service of not to exceed 6,000 men, who shall be attached permanently to the Quartermaster Corps, and who shall not be counted as a part of the enlisted force provided by law. * * * That enlisted force of the Quartermaster Corps shall consist of not to exceed 15 master electricians, 600 sergeants (first class), 1,000 sergeants, 650 corporals, 2,500 privates (first class), 1,190 privates, 45 cooks, all of whom shall receive the same pay and allowances of enlisted men of corresponding grades in the Signal Corps of the Army, and shall be assigned to such duties pertaining to the Quartermaster Corps as the Secretary of War may prescribe: *Provided further*, That the Secretary of War may fix the limits of age within which civilian employees who are actually employed by the Government when this act takes effect and who are to be replaced by enlisted men under the terms of this act may enlist in the Quartermaster Corps. * * *

Regulations were drafted and promulgated in General Orders, No. 40, War Department, October 25, 1912, to carry the foregoing section into effect. Circular No. 11, O. C. Q. M. C., dated November 19, 1912, prescribes the method of examination required for filling the several grades authorized by law.

On November 4, 1912, apportionments of enlisted men, Quartermaster Corps, were made to the various geographic departments and to independent posts and stations. Sufficient men of suitable grade were authorized to replace all unclassified civilian employees under 45 years, the age fixed by the Secretary of War, and to replace all enlisted men of the line on extra duty at a ratio of two Quartermaster Corps men for every three men on extra duty, as extra-duty men were so employed but a portion of the time.

* * * * * * *

On June 30, 1913, a total of 1,594 civilian employees in the United States and 2,045 enlisted men of the line on extra duty in the Quartermaster Corps had been replaced by 2,816 enlisted men of the Quartermaster Corps.

No classified civil-service employee nor unclassified civil-service employee at depots of the Quartermaster Corps in large cities has been removed for the purpose of filling the vacancy by an enlisted man of the Quartermaster Corps, and no unclassified civil-service employees over 45 years of age at posts have been removed for this purpose.

* * * * * * *

Pay clerks.—On August 24, 1912, the number of pay clerks in the service was 85.

The act of August 24, 1912, provides:

* * * The Army paymaster's clerks shall be known as pay clerks.

and the act of March 2, 1913, making appropriations for the support of the Army for the fiscal year ending June 30, 1914, provides:

* * * that hereafter no further appointments of pay clerks shall be made.

Between August 24, 1912, and June 30, 1913, 3 pay clerks died, 1 was retired, and 1 resigned, making a total of 5 vacancies, only one of which was filled, leaving a total of 81 pay clerks in the service on June 30, 1913.

Civilian employees.—There are distributed throughout the United States and its insular possessions approximately 8,500 civilian employees.

An actual saving of $47,030 per annum for clerical hire in the office of the Chief of the Quartermaster Corps has resulted from the consolidation of the office establishments of the Quartermaster General, the Commissary General, and the Paymaster General.

NATIONAL CEMETERIES.

There are 83 national cemeteries, classified as follows:

First class	26
Second class	21
Third class	13
Fourth class	23

Appropriated fiscal year 1913 for care and maintenance of national cemeteries	$120,000.00
Expended from appropriation "National cemeteries," fiscal year 1913	116,198.49
Leaving an unexpended balance of	3,801.51

Expenditures are made from appropriation "National cemeteries" for the care and maintenance of such cemeteries, pay of laborers and other employees, purchase of tools and materials, fuel for superintendents, and for the care of historic sites and improvement of soldiers' lots and plats owned by the United States in private cemeteries reserved for the interment of Federal soldiers.

The work done at the various national cemeteries during the fiscal year consists of keeping in proper care and condition the buildings, drives, walks, walls, fences, monuments, etc.

Superintendents.—

The appropriation for the pay of superintendents of national cemeteries, fiscal year 1913, was	$62,760.00
Amount expended	62,753.00
Leaving an unexpended balance of	7.00

There are 76 superintendents of national cemeteries authorized by law. Seven cemeteries were under charge of caretakers during the fiscal year. There have been four casualties during the year—three by death and one by dismissal. Four new appointments made.

Government approach roadway.—There are 19 Government approach roadways to national cemeteries maintained from the annual appropriation of $12,000 for this purpose; $10,843.25 was expended for resurfacing and repairing roads, leaving an unexpended balance of $1,156.70.

Post cemeteries.—Approximately $4,500 was expended in the repair and maintenance of post cemeteries during the fiscal year. Remains, Government headstones, and private monuments were removed from the cemetery at Fort Canby, Wash., to the post cemetery at Fort Stevens, Oreg., which has been designated as the place of interment for all posts in the artillery District of Columbia.

Headstones.—A contract was entered into for furnishing 20,000 regulation headstones, at $2.60 each, for the unmarked graves, the furnishing of the headstones for which was authorized under acts of March 3, 1873, February 3, 1879, and March 9, 1906, and for headstones of the unmarked graves of civilian employees interred in post

cemeteries authorized in acts of April 28, 1904, and June 30, 1906. Twelve thousand, six hundred and seventy-five (12,675) headstones were shipped for this purpose during the fiscal year.

Disposition of remains.—

Appropriated fiscal year 1913	$57,500.00
Expended	49,457.02
Leaving an unexpended balance of	8,042.98

The following disposition was made of the remains of officers and enlisted men of the Army, active list, and of the remains of civil employees of the Army in the employ of the War Department, who died abroad or on Army transports:

Received at San Francisco, Cal., from abroad, including Alaska:		
Shipped home	63	
Delivered to relatives	12	
Interred in San Francisco, Cal., National Cemetery	63	
Awaiting disposition, July 1, 1913	3	
		141
Included in the above statement are the remains of 11 civilian employees, 20 civilians (not employees), and 13 remains handled for the Navy Department.		
Buried at sea (civilian employee)	1	
Received at Seattle, Wash., from Alaska and shipped home	8	
Received at New York from Panama, Canal Zone, and interred in Cypress Hills National Cemetery	1	
Interred in Ancon Cemetery, Panama	5	
	6	
		15
In the United States:		
Drowned, not recovered	2	
Shipped home	196	
Interred in post or national cemeteries	137	
		335
Total		491

Under this act, which also provides for the removal to national cemeteries at Government expense of the remains of Union soldiers, sailors, or marines interred in abandoned military posts or in fields or abandoned private and city cemeteries, 104 remains were disinterred and removed from the Fort Canby, Wash., cemetery and reinterred in the Fort Stevens, Oreg., cemetery; 12 remains removed from the post cemetery at Fort H. G. Wright, N. Y., to the Cypress Hills National Cemetery at Brooklyn, N. Y.; 1 remains from the farm of George Lynchach and reinterred in the Stone River, Tenn., National Cemetery; 176 remains removed from the abandoned military post of Fort Assinniboine, Mont., and reinterred in the Custer Battlefield, Mont., National Cemetery; also 37 remains from the abandoned military post of Fort Duchesne, Utah, reinterred in the National Cemetery at Santa Fe, N. Mex.

There being no appropriation under the control of this office which authorizes the burial of the remains of military prisoners who die at military posts while serving out sentence of general courts-martial, nor for the expenses of interment or shipment to their homes of the remains of civilian employees of the Army who die while on duty in the field or at military posts within the limits of the United States, it

is recommended that Congress be asked to extend the provisions of the law under the item "Disposition of remains of officers, soldiers, civilian employees, etc.," to include these two classes.

* * * * * * *

Under the provisions of the act of May 9, 1910, authorizing the Secretary of War to remove the mast of the wreck of the battleship *Maine* and place it on a proper foundation in Arlington National Cemetery, preliminary designs prepared by Mr. Nathan C. Wyeth, architect, for an elaborate memorial were accepted by the Commission of Fine Arts and approved by the Secretary of War, who authorized an allotment of $55,613 from the appropriation "Raising U. S. S. *Maine*, Habana Harbor, Cuba," for the erection of the memorial on a site slected for the purpose in the *Maine* section of the cemetery. The work is to be done under contract during the coming fiscal year.

By section 14 of the public buildings appropriation act approved March 4, 1913, it was provided that for the purpose of beginning the construction under the direction of a commission consisting of the Secretary of War, the Secretary of the Navy, and Superintendent of the United States Capitol Building and Grounds, Ivory G. Kimball, representing the Grand Army of the Republic, and Charles W. Newton, representing the United Spanish War Veterans, of a memorial amphitheater, including a chapel, at the National Cemetery at Arlington, Va., and in accordance with the plans of Cariere & Hastings, architects, New York City, adopted by the commission heretofor appointed, there was authorized the sum of $250,000, provided that the authorization shall not be construed as fixing the limit of cost of said building at the sum therein named, but the building therein provided for shall be constructed so as to cost, complete, including heating and ventilating apparatus and approaches, $750,000.

The said commission was also authorized to enter into contracts for the construction of said memorial amphitheater and chapel within the ultimate limit of cost above mentioned. Provided further, that the said commission, may, in its discretion, locate said chapel elsewhere upon the Arlington estate, and in that event may expend of the sum hereby authorized not more than $75,000 for the purpose of constructing said chapel.

A site for the amphitheater and chapel which has been approved by the commission of fine arts, has been selected and an estimate of $250,000 for the purpose of beginning the construction has been submitted to Congress by the Secretary of the Treasury in accordance with an opinion of the Attorney General rendered April 8, 1913, that the above-mentioned act does not authorize any present expenditure and that an estimate of the requirements should be submitted.

The sundry civil act approved August 24, 1912, authorized the interment in the Confederate section, Arlington National Cemetery, thereafter of persons dying in the District of Columbia who have served in the Confederate Armies during the Civil War, on the certificate of Camp 71, United Confederate Veterans of the District of Columbia, that such persons are entitled to burial under the authority so given, such interments to be made under the supervision and

control of the Secretary of War. Since the passage of this act there have been three interments in the Confederate section at Arlington.

Under the authority of the same act, 31,250 square feet of land adjoining the Cave Hill National Cemetery, Louisville, Ky., were purchased from the Cave Hill Incorporated Cemetery Company at a cost of $25,000, the amount of the appropriation, in order to provide about 1,000 additional burial sites in that National Cemetery.

Under the provisions of the act of February 7, 1913, public No. 363, Sixty-second Congress, third session, the Confederate Cemetery at Little Rock, Ark., adjoining the Little Rock National Cemetery and comprising about 11 acres, was conveyed to the United States on June 9, 1913, by deed of gift from the Little Rock Memorial Chapter, No. 48, United Daughters of the Confederacy.

An appropriation of $1,000 was provided in the sundry civil act of August 24, 1912, for repairs and preservation of monuments, tablets, etc., constructed by the United States in Cuba and China, and has been expended mainly in the hire of a caretaker for the San Juan Battlefields in Cuba and the purchase of miscellaneous supplies.

The appropriation of $1,250 carried in this act for the care, protection, and maintenance of Confederate burial plats, owned by the United States at North Alton, Ill., Camp Chase, Columbus, Ohio, Greenlawn Cemetery, Indianapolis, Ind., Point Lookout, Md., and Rock Island, Ill., has been expended by this corps in repairs and improvements. These plats were acquired by the commissioner for marking the graves of Confederate dead, were properly graded, seeded, and inclosed with iron fences, and individual headstones or central monuments were erected prior to jurisdiction being transferred to this corps in 1912. The remains of 10,418 Confederate prisoners of war are buried in these plats.

* * * * * * *

SUPPLIES.

All supplies necessary for the maintenance and upkeep of the Army, such as rations and other subsistence stores, ranges, cooking and heating stoves, baking and cooking appliances, typewriters, stationery, office furniture, tableware and kitchen utensils, and equipment for troops, have been promptly and efficiently furnished.

Supply of troops in the field at Galveston and Texas City, Tex., and along the Mexican border.—The troops of the Second Division in camp at Texas City and Galveston, Tex., have been satisfactorily supplied with stores and services under a plan of supply for field service worked out by this office and approved by the Secretary of War under date of March 13, 1912.

This system provides for the supply of troops direct from base depot at Galveston upon requisitions submitted by the troops to the depot through the division authorities. The Galveston base depot is in turn supplied direct from the depot of the Quartermaster Corps at St. Louis, Mo., upon copies of invoices covering transfers to troops. Under the plan above referred to accountability of subsistence stores and expendable articles of quartermaster stores terminates with their transfer from the Galveston depot to the troops in the division. Nonexpendable articles are issued to organizations on memorandum

receipt. This relieves the quartermasters with troops from detailed paper work in connection with property accountability, leaving with them the matter of responsibility only, the depot quartermaster at Galveston, the base, being the accountable officer for all such property.

The same system of supply prevails in connection with troops along the border of Texas, New Mexico, and Arizona, with El Paso as the point of supply.

This plan of supply has proven efficient in that all troops at the point named are generally amply and expeditiously supplied with the stores necessary for their equipment and comfort in the field and with the minimum of paper work on their part.

Temporary shelters for all animals, bathing facilities for the troops, and kitchen shelters for companies, etc., at Texas City and Galveston, Tex., and temporary shelters for animals at the several camps along the Mexican border have been provided from materials on hand at depots and with small expenditures from the appropriations "Barracks and quarters" and "Water and sewers."

The main source of supply of troops of the Second Division and troops along the border has been the general depot at St. Louis, Mo. Articles not on hand at St. Louis or readily procurable there have been obtained at the New York, Philadelphia, and Jeffersonville depots. Subsistence stores have generally been procured locally, but evaporated milk was obtained from St. Louis, bacon and canned meats from Chicago, and fresh beef from Houston and Fort Worth. The fresh beef supplied to troops at Galveston and Texas City has been of a satisfactory quality. The total quantity inspected was approximately 800,000 pounds. There was rejected because of diseased cattle, old cattle, and failure to come up to specifications as to weight, conditions, etc., 87,966 pounds. Issues of fresh beef are made direct from refrigerator cars to organizations. There were heavy losses on fresh vegetables, due to long storage on transports and climatic conditions.

Troops at Galveston and Texas City are furnished with fresh bread daily from the field bakeries at these points. The quality of bread is excellent and supply ample at all times.

Relief of flood and cyclone sufferers.—The Quartermaster Corps was called upon to furnish supplies and services for the relief of sufferers from the floods of the Mississippi and Ohio Valleys in the spring and summer of 1913.

The amounts expended for this purpose are as follows:

Clothing and equipage	$216,748.97
Regular supplies	23,643.05
Incidental expenses	2,444.56
Army transportation	177,055.94
Subsistence of the Army	229,625.16
Water and sewers	443.85
Mileage	4,486.96
Total	654,448.49

Celebration of the fiftieth anniversary of the Battle of Gettysburg.—This celebration lasted from June 29 to July 4, inclusive, 1913. The camp was laid out and installed and the necessary subsistence, equipment, field ovens, field ranges, tentage, cots, blankets, etc., were furnished by the Quartermaster Corps under authority contained in the act of Congress approved August 26, 1912.

Forage.—There was expended during the fiscal year for forage of animals pertaining to the Army, $3,784,609.17. This includes the forage used in the Philippine Islands, Alaska, Hawaiian Islands, and Porto Rico, except native grass and bedding purchased in the Philippine Islands. In addition to the foregoing there was purchased 86,200 pounds of dog food at a cost of $6,256.26.

Fuel.—During the fiscal year 1913 fuel for all purposes except for transports and harbor boats cost $2,059,428.

* * * * * * *

Mineral oil.—Purchases of mineral oil for lighting purposes, except for the Philippine Islands, were made at an aggregate cost of $51,143.20.

Issues to the militia.—Miscellaneous supplies to the value of $123,712.97 (except subsistence supplies) were issued to the Organized Militia during the fiscal year under the authority of statutes providing for such issue.

No gratuitous issues of such supplies were made to the Organized Militia of the District of Columbia.

Telephones.—During the fiscal year 1913, $32,129.34 was expended for rental of telephones.

CLOTHING AND EQUIPAGE.

Appropriation by Congress for the purchase and manufacture of clothing and equipage for the fiscal year ended June 30, 1912	$5,000,000.00
Credits on account of issues of clothing and equipage to the Militia of the States, Territories, and the District of Columbia during the fiscal year 1912–13, for which the appropriation has been or will hereafter be reimbursed	1,150,751.06
Deposits from all other sources, consisting of sales of all kinds, but not including issues to the States and Territories and the District of Columbia, nor collections from enlisted men at time of discharge from the service on account of clothing drawn in excess of established allowances	165,445.12

Collections and disbursements in connection with the settlement of the clothing accounts of the enlisted men of the Army.—The following statement shows the collections from and disbursements to the enlisted men of the Army in the settlement of their clothing accounts, viz:

Collection on account of clothing drawn in excess of established allowances:	
Appropriation 1912—	
From Apr. 11, 1912, to June 30, 1912	$6,462.95
From July 1, 1912, to Mar. 31, 1913	94,541.22
Appropriation 1913—	
From July 1, 1912, to Mar. 31, 1913	63,852.80
Total collections	164,856.97
Payments to enlisted men at time of discharge from service, on account of clothing undrawn:	
Appropriation 1912—	
From Apr. 1, 1912, to June 30, 1912	165,876.93
From July 1, 1912, to Mar. 31, 1913	11,469.95
Appropriation 1913—	
From July 1, 1912, to Mar. 31, 1913	696,246.33
Total expenditures	873,593.21

Issues to the militia.—The following is a detailed statement showing the value of clothing and equipage supplies ordered to be issued to the Militia of the States and Territory of Hawaii and of the District of Columbia during the fiscal year ended June 30, 1913, upon requisitions approved by direction of the Secretary of War. In order to facilitate the supply of the articles called for, issues were made from the supplies procured for the Army and the appropriation for clothing and equipage has been or will hereafter be reimbursed:

States and Territory.	Act of May 27, 1908.	Act of June 22, 1906, amending sec. 1661, R. S.	Total.
Alabama	$492.43	$35.88	$528.31
Arizona	1,346.10		1,346.10
Arkansas	2,201.22	367.24	2,568.46
California	32,807.40	415.83	33,223.23
Colorado	11,621.53	900.45	12,521,98
Connecticut	23,618.10	7,528.71	31,146.81
Delaware	4,184.75	44.65	4,229.40
District of Columbia	10,749.33	2,076.77	12,826.10
Florida	11,748.25	474.92	12,223.17
Georgia	33,107.39	506.77	33,614.16
Hawaii	5,763.95	2,188.67	7,952.62
Idaho	4,408.00	19.10	4,427.10
Illinois	65,921.45	265.40	66,176.85
Indiana	9,172.52		9,172.52
Iowa	2,724.85	953.88	3,678.73
Kansas	14,641.06	135.28	14,766.34
Kentucky	13,296.39	8.82	13,305.21
Louisiana	15,021.74	8.76	15,030.50
Maine	13,281.77	5,454.08	18,735.86
Maryland	17,258.27	15,972.23	33,230.50
Massachusetts	21,097.50	114.59	21,212.09
Michigan	31,142.87	7,400.60	38,543.47
Minnesota	21,989.40	1,531.40	23,520.80
Mississippi	17,628.98	154.63	17,783.61
Missouri	38,766.44	147.53	36,913.97
Montana	5,722.94		5,722.94
Nebraska	24,820.50	187.75	25,008.25
New Hampshire	6,895.59	1,938.18	8,833.77
New Jersey	43,777.39	9,093.71	52,871.10
New Mexico	4,399.03		4,399.03
New York	139,715.07	13,094.57	152,809.64
North Carolina	23,058.28		23,058.28
North Dakota	7,324.54	1,246.33	8,570.87
Ohio	63,858.03	235.77	64,093.80
Oklahoma	$111.32	$369.08	$480.40
Oregon	14,010.85	35.88	14,046.73
Pennsylvania	83,854.04		83,854.04
Rhode Island	13,710.81	1,526.35	15,237.16
South Carolina	21,194.83	5,832.90	27,027.73
South Dakota	7,667.70	3,175.22	10,842.92
Tennessee	14,499.93	3,989.71	18,489.64
Texas	30,931.39	2,613.62	33,545.01
Utah	6,527.94	408.14	6,936.08
Vermont	7,115.98	2,897.00	10,012.98
Virginia	24,034.58	2,097.10	26,131.68
Washington	13,546.40	1,923.59	15,469.99
West Virginia	10,632.17	22,501.98	33,184.15
Wisconsin	31,769.77	2,985.89	34,755.66
Wyoming	5,423.10	1,258.22	6,681.32
Total	1,026,643.87	124,107.19	1,150,751.06

Sales to the militia.—There were sold to governors of the following States, including the Territory of Hawaii and to the commanding general, District of Columbia, for the use of the militia, under the provisions of section 17 of the act of Congress approved January 21, 1903, clothing and equipage supplies to the value of $24,694.96, which amount has been placed to the credit of the appropriation for clothing and equipage, viz:

Arizona	$14.71	Montana	$270.59
California	1,484.32	Nebraska	15.36
Connecticut	943.69	New Mexico	.45
District of Columbia	156.73	New York	808.38
Florida	27.79	North Dakota	977.56
Georgia	770.50	Ohio	550.30
Hawaii	33.98	Oregon	93.44
Illinois	590.64	Pennsylvania	2,401.83
Indiana	58.81	Rhode Island	370.82
Iowa	762.79	Tennessee	22.35
Kansas	143.52	Texas	18.83
Kentucky	.45	Utah	92.21
Louisiana	19.30	Vermont	3,969.81
Maine	708.67	Virginia	412.11
Maryland	376.40	Washington	931.70
Massachusetts	1,975.90	West Virginia	3,465.66
Michigan	97.15	Wisconsin	809.71
Minnesota	789.29		
Mississippi	477.74	Total	24,694.96
Missouri	51.47		

Sales of clothing and equipage to various departments and bureaus of the Government.—There were sold during the fiscal year ending June 30, 1913, to various departments and bureaus of the Government, under special authority of the Secretary of War, in accordance with the provisions of paragraph 682, Army Regulations, 1910, as amended, clothing and equipage supplies to the value of $44,103.91, which amount has also been placed to the credit of the appropriation for clothing and equipage as follows:

Department of Agriculture	$404.88
Department of Commerce and Labor	360.45
Engineer Department	3,208.64
United States Geological Survey	1,634.02
Department of the Interior	1,035.06
Isthmian Canal Commission	$597.02
Bureau of Insular Affairs	316.75
Department of Justice	66.98
United States Marine Corps	246.28
Navy Department	29,494.04
Ordnance Department	34.08
United States Soldiers' Home	5,256.45
Supply Division, War Department	15.80
Smithsonian Institution	18.64
Treasury Department	1,359.00
Superintendent State, War and Navy Department Building	55.82
Total	44,103.91

Sales at auction.—There was realized during the fiscal year ended June 30, 1913, at the several purchasing and manufacturing depots of the Quartermaster Corps from sales of condemned articles of clothing and equipage and cuttings, etc., the sum of $34,452.57. The expense in making these sales was $256.40, leaving a balance of

$34,196.17, which, as required by law, was covered into the Treasury of the United States, and credited to miscellaneous receipts.

Status of clothing and equipage supplies, including purchases, manufactures, and issues to the Army and the militia.—The accompanying consolidated statement shows in detail the quantities of clothing, equipage and materials purchased, manufactured, and issued to the Army and the militia during the fiscal year ended June 30, 1913, and the quantities remaining on hand on said date, exclusive of the quantities in Field Supply Depot No. 1.

Clothing and equipage purchased and manufactured for exclusive issue to troops stationed in Alaska.—The following is a statement showing the articles of clothing and equipage purchased or manufactured during the fiscal year ended June 30, 1913, for issue to troops stationed in Alaska, and cost of same, amounting to $42,137.87, viz:

Articles.	Quantity.	Unit price.	Total.
At San Francisco:			
Boots, rubber, Alaskan	1,296	$3.18	$4,121.38
Drawers, wool, knit	2,000	1.80	3,600.00
Gloves, Scotch wool, pairs	1,377	.71	977.67
Gloves, horsehide, do	78	1.28	99.84
Gauntlets, canvas, do	624	.98	611.52
Insoles, felt, do	1,388	.23	319.24
Mittens, duck, do	1,414	.45	636.30
Mittens, horsehide, do	1,021	1.12	1,143.52
Mittens, Siwash, do	1,021	2.79	2,848.59
Parkas, duck	351	3.00	1,053.00
Jackets, pea	636	5.75	3,657.00
Socks, rope, pairs	390	.40	156.00
Stockings, German, do	1,283	.97	1,244.51
Pacs, shoe, do	1,377	3.63	4,998.51
Slickers, Alaskan	806	1.73	1,394.38
Sweaters, Alaskan	156	3.60	561.60
Toques	1,827	.38	694.26
Trousers, duck	1,377	2.75	3,786.75
Undershirts	2,041	1.80	3,673.80
Parkas, reindeer	27	55.50	1,498.50
Mittens, Alaskan fur, pairs	41	4.00	164.00
Covers, tent sled	20	14.50	290.00
At Fort Davis, Alaska:			
Boots, water mucklucks, pairs	390	4.35	1,696.50
Boots, winter mucklucks, do	390	4.30	1,677.00
By department quartermaster, Western Department:			
Tents, mosquito	12	22.50	270.00
At Omaha, Nebr.:			
Buffalo robes, marking	241	4.00	964.00
Total			42,137.87

Buffalo overcoats.—Three thousand five hundred and seventy-three buffalo overcoats remained on hand July 1, 1913. These coats were stored at the Omaha depot of the Quartermaster Corps. There were sold during the last fiscal year under authority of the Secretary of War 462 coats. The sum of $13,666.05 was realized, an average of $29.58 each.

Amount credited on the clothing money accounts of enlisted men during the fiscal year ended June 30, 1913, on account of purchase of blankets.—Woolen blankets in the hands of enlisted men on July 1, 1913, and which were issued to them prior to said date and charged upon their clothing money accounts, became the property of the United States and for each and every serviceable blanket turned over, not exceeding two, a credit of $2.68 was given on the clothing account of the soldier from whom the blankets were purchased. Blankets which in the

opinion of company commanders were unfit for further service have been submitted to the action of surveying officers with a view to determining the advisability of purchase.

The records of this office show that from July 1, 1912, to March 31, 1913, the sum of $26,453.84 was placed to the credit of enlisted men on account of the purchase of these blankets in the manner indicated.

Renovation of olive drab overcoats.—As stated in the last annual report of the clothing supply branch, the issue of overcoats to company and detachment commanders for use of the enlisted men of their respective commands was carried into effect. The coats thus issued remain the property of the United States and will be turned in by the men upon their discharge from the military service. The coats thus turned in are being accumulated at posts and then transferred to the Philadelphia depot for cleaning and renovation.

Report is made that there were turned into the depot named during the last fiscal year 1,342 overcoats, which were cleaned at a cost of $916.94; 91 were found unfit for repair. The remainder were repaired at a cost of 80 cents each.

Changes in specifications for clothing and equipage.—With a view to having the several articles of equipage enumerated below conform to standard commercial types, specifications for these particular articles have been so modified as to provide for purchase upon samples to be submitted by bidders with proposals: Axes, ax helves, rubber boots, corn brooms, scrubbing brushes, fly and suspender buttons, black Italian cloth, corset jeans, drilling, white cotton gloves, hatchets, hatchet helves, black and canvas padding, pickaxes, pickax helves, long and short handled shovels, spades, stovepipe, and suspenders.

Olive drab woolen materials.—It is of interest to comment upon the beneficial results which have obtained from the change from olive drab worsted to woolen materials used in the manufacture of overcoats and woolen service coats and breeches.

The reasons for making the change are fully set forth in the annual report of the Quartermaster General for the fiscal year ended June 30, 1911. The average prices last paid for worsted materials were as follows:

22-ounce	per yard..	$2.04
16-ounce	do....	1.57½
13-ounce	do....	1.30½

The prices paid during the last fiscal year for woolen materials, with greater competition than heretofore, were:

22½-ounce	per yard..	$1.69
16½-ounce	do....	1.37
13½-ounce	do....	1.314

Issue of clothing, old style.—Paragraph IV, General Orders, No. 129, War Department, September 21, 1911, requires that when changes or modifications are made in articles of clothing or equipage issues to the Army and the Organized Militia of the kind and pattern on hand be continued until exhausted.

The provisions of this order were complied with until the stock of the old-style articles referred to had become exhausted to such an extent as to make it no longer practicable to make further issues.

Shoes.—The new style of russet shoes recommended by the board of officers convened under the provisions of paragraph 7, Special Orders, No. 57, 1911, from the headquarters, Central Division, referred to in the last annual report of the Quartermaster General, having been approved by the Secretary of War, specifications for same eliminating the black dress and russet garrison shoes heretofore issued to the enlisted men of the Army, thereby providing for only one style of shoes, were adopted on August 15, 1912, and standard samples conforming thereto were procured and furnished the general purchasing depots of the Quartermaster Corps. With a view to increasing competition specifications were revised so as to conform more closely to commercial trade conditions. In revising these specifications this office was materially assisted in the revision by the Bureau of Chemistry of the Department of Agriculture and several of the large shoe manufacturers.

Shoe lasts.—In order that the corps may be prepared to furnish hereafter to contractors the necessary lasts required in the manufacture of shoes, 30,000 pairs have been purchased to date and an advertisement for 5,000 additional pairs is now pending.

Stockings.—The question of changing the mode of manufacturing the light weight woolen stockings by having the yarns made entirely of either wool or cotton, instead of blending the two materials into one yarn, as in the present standard, was brought to the attention of this office by the depot quartermaster at Philadelphia.

Inasmuch as the stockings as issued have proven to be very satisfactory this office did not consider it advisable to make the proposed change. The method proposed, it was believed, would not be of any particular advantage considering serviceability, comfort, or shrinkage in laundering.

Service hats.—Numerous complaints having reached this office that the service hats were uncomfortable on account of the stiffness of the brim and consequently they did not conform to the contour of the head, the Chief of Staff directed that this fault be corrected, which has been accomplished by the elimination of the process known as wine-stiffening and substituting the commercial process of water-stiffening. The standard and specifications have therefore been changed. Manufacturers are now permitted to use raw materials either domestic or foreign.

Materials for shelter tents, slickers, and ponchos.—After numerous tests this office has not yet succeeded in obtaining a satisfactory material for shelter tents, slickers, and ponchos to conform with the recommendation of the Cavalry and Equipment Board.

Riding gloves.—The Uniform Regulations of 1912 (par. 74–a) provide that mounted troops shall be supplied with riding gloves, when prescribed. In order to prepare to meet requisitions the Chief of Staff directed that suitable samples be procured. Several manufacturers were called upon to submit samples from which the Chief of Staff selected a horsehide glove, dyed olive drab and conforming closely in shade to the service uniform.

Improvements in tents.—In order to further standardize the tents used in the Army as far as practicable, it was decided to discontinue the manufacture of wall tents for officers and adopt in lieu thereof a pyramidal tent, of the same construction as those adopted for the

enlisted men and making them of the same material. The following are the dimensions:

Height of tent when pitched	feet	8
Height of wall	do	3
Base	feet square	9

This tent is much more roomy and can easily be handled. It will no doubt meet with general favor. The depot at Philadelphia, Pa., has been instructed to proceed with their manufacture and orders to make 5,000 have been given. Issues will be made as soon as the present available supply of wall tents shall have been exhausted.

Ward tents for hospital purposes.—At the request of the Surgeon General of the Army and by direction of the Acting Chief of Staff of January 14, 1913, a sample of a ward tent for hospital purposes, conforming to the design of Maj. H. L. Gilchrist of the Medical Corps of the Army was furnished by the Quartermaster Corps for experimental purposes and for consideration by the board of officers convened at the Walter Reed General Hospital, District of Columbia, pursuant to the provisions of paragraph 32, Special Orders, No. 240, War Department, October 19, 1912. Having met with favorable consideration the board recommended the construction of a number of these tents for the equipment of field hospitals. These tents are now being manufactured and will soon be ready for issue. Orders have also been given for the manufacture of an additional number for future supply. These tents will provide space for 24 beds; they measure 50 feet in length, are 16 feet in width, and weigh 530 pounds each. Each tent will replace three of the regulation hospital tents.

Shelter tents.—Several suggestions have been made to this office to change or modify the present shelter tents, and a few samples have been manufactured and distributed for trial and report.

Subsistence.

DEBITS.

Salaries of civilian employees and board wages including employees of office of subsistence superintendent in work pertaining to the transport service	$171,962.93
Cost of food furnished in several messes	411,731.19
Commutation of rations to patients in hospital	4,019.10
Value of ice dropped as wastage	5,520.53
Losses on stores due to deterioration	969.26
Losses on property	23.40
Value of property expended	686.35
Value of miscellaneous issues	2,761.02
Total	597,673.78

CREDITS.

Cash collections for meals	88,110.78
Amount paid and collectible on account of meals furnished bureaus and other departments of the Government	42,091.70
Miscellaneous sales, corrections of errors, etc	392.75
Gains in stores	594.35
Credit given for value of issues to troops, civilian employees, and general prisoners	61,976.52
Total	193,166.10

SUMMATION.

Total debits	$597,673.78
Total credits	193,166.10
Net cost	404,507.68

Statement of issues made during the fiscal year 1913.

Garrison, travel, haversack, and trail rations (29,767,537), average cost, 23.41387 cents	$6,969,732.54
Filipino rations (2,188,848), average cost, 17.11074 cents	374,528.11
Emergency rations (9,856)	3,379.91
Articles other than ration articles issued	122,567.18
Ice issued	67,880.05
Recruit kits issued	32,671.60
Housewives issued	687.94
Gratuitous issues to destitutes, etc	3,010.01
Reimbursement issued	1,944.04
Issued to Indian prisoners of war	10,595.37
Total value of issues	7,586,996.75

Number, value, and average cost of rations, by geographical divisions, etc., issued during the fiscal year 1913.

Division.	Number of rations.	Value.	Average cost (cents).
United States (includes Canal Zone)	22,675,086	$5,230,135.34	23.07
Alaska	400,949	140,213.88	34.97
Hawaii	1,583,733	389,096.65	24.56
Porto Rico	230,179	63,878.15	27.75
Transports	226,923	61,976.52	27.31
Philippines (American)	4,650,667	1,084,432.00	23.31
Total average cost (American)	29,767,537	6,969,732.54	23.41
Philippines (native)	2,188,848	374,528.11	17.11
Canal Zone	281,742	87,890.11	31.19

Statement showing average cost of the ration with and without transportation.—The average cost of the actual food included in the garrison (American) ration during the fiscal year was as follows:

	Cents.
At all posts or stations in the United States	23.3962
At all posts or stations in the Philippines and on transports	23.5036
At all posts or stations in the United States, Philippines, and on transports	23.4138

The cost of transportation charged on subsistence supplies was $262,956.27. This includes the cost of transportation for the ration articles, sales articles, and property. Charging this amount to the total cost of the garrison ration issued, it gives for the past fiscal year an increased cost for each ration of 0.8834 cent, thus making the cost of the garrison ration, delivered, including food, and transportation, as follows:

	Cents.
At all posts or stations in the United States	24.2796
At all posts or stations in the Philippine Islands and on transports	24.3870
At all posts or stations in the United States, Philippine Islands, and on transports	24.2972

Statement showing the yearly and per diem cost of subsistence per man in the United States and Philippines.

	Number of rations.	Daily average number of men.	Net cost.	Average cost per year.	Average cost per diem (cents).
Cost in the United States	24,892,078	68.197	$7,416,461.62	108.75	29.79
Cost in the Philippines	7,064,307	19.354	2,094,801.41	108.23	29.65

The above gives expenditures made in the United States and Philippines, respectively, from the appropriation "Subsistence of the Army, 1913," and includes cost of rations issued, commutation of rations of all kinds, ice, meals, clerical hire, extra-duty pay, net cost of transport service, net losses of stores and property; in other words, indicates the actual cost per man per day in the United States and Philippine Islands, as far as subsistence is concerned:

Losses.

DEBITS.

Ordinary wastage and losses in issue and transportation	$16,874.44
Deterioration of stores from climatic causes, etc	37,902.74
Theft	7.30
Property expended and worn out in the Government service	37,132.02
Total debits	91,916.50

CREDITS.

Reclamations made from carriers and contractors	1,943.73
Receipts from sales at auction of deteriorated supplies	8,129.60
Gains on stores (account issues)	13,289.36
Gains on property	692.65
Total credits	24,055.34
Total debits	91,916.50
Total credits	24,055.34
Net losses	67,861.16

The net loss of $67,861.16 is 0.8838 of 1 per cent of the total disbursements, amounting to $7,677,948.25.

The losses above referred to occurred in geographical divisions as follows:

United States	$49,352.24
Philippine Islands	35,616.29
Alaska	3,295.25
Transports	1,679.01
Hawaii	1,484.63
Porto Rico	489.08
Total	91,916.50

Changes in Army ration.—Under Executive order of January 21, 1913, "lard compound" was added as a substitutive article for lard in the garrison ration in order to reduce the cost of same. Later it was found that the term "lard compound" did not quite cover the article which it was desired to procure, and that the general trade term for the article desired was "lard substitute." In consequence

this office made a recommendation setting forth the reasons for the change and requesting that same be made, which was approved and formally authorized by Executive order dated July 15, 1913. Lard and lard substitute are now required to be used in proportion of 50 per cent each, in computing the value of the ration.

In the case of the butter component a recommendation was approved providing that computation should be made on a basis of 50 per cent butter and 50 per cent oleomargarine. This change was also made in order to reduce the cost of the ration, for the reason that if the computation was made upon the item of a high-priced article like butter only, it would add very materially to the cost of the ration.

Training schools for bakers and cooks.—Recommendation was made for the establishment at Fort Sam Houston of a training school for bakers and cooks, in order that the Southern Department should be provided with a school similar to those now in operation in the Eastern Department, at Washington Barracks; in the Central Department, at Fort Riley; and in the Western Department, at the Presidio of San Francisco. Such a school would insure a trained personnel that would be available for field service in an emergency, and enable the students to receive instructions in handling a bakery under field conditions.

The establishment of such a school would call for available space at Fort Sam Houston for school of about 30 men, which would require a laboratory, study, and recitation rooms. It should be located as near to the bakery as possible, for with the establishment of the school it is contemplated that the management of the bakery should be under the direction of the officer in charge of the school, this being the most desirable means of imparting instruction in baking to the students.

The number of students graduated during the year at the bakers and cooks' school at Washington Barracks, D. C., was 29 enlisted men as bakers, 43 as cooks, and 10 as mess stewards; at Fort Riley, Kans., 40 enlisted men as bakers, and 192 as cooks; at the Presidio of San Francisco, Cal., 82 enlisted men as bakers, 71 as cooks, and 12 as mess stewards. The number of officers who graduated during the year at Fort Riley were 5 officers in the bakers' course and 7 in the cooking course.

Militia attending training schools for bakers and cooks.—Officers and enlisted men of the militia are authorized to avail themselves of the opportunity of attending service schools, including the training schools for bakers and cooks. It does not appear from the records of this office that the officers and enlisted men of the Organized Militia have generally availed themselves of the opportunity for taking the prescribed course in the schools for bakers and cooks, only one or two officers and probably not exceeding four men having asked for detail to this very important course. From this fact it is inferred that the availability of this course of study to the militia is not generally known to the members of that organization. It is thought that if the attention of adjutants general of the States could be directed to this matter, through the office of the Chief of Division of Militia Affairs, many officers and enlisted men would be glad to avail themselves of the instruction offered to perfect themselves in the trade of baking and cooking. The importance of this instruction would be invaluable to militia organizations in time of war, for the trained men could be used as a nucleus for a training school for the volunteer and militia organi-

zations. In this connection it may be stated that if the Organized Militia were called into service in time of war they could place probably five or six divisions in the field. As field bakeries have been regularly adopted for use in field service at the rate of one for each division, it will be seen that there should be officers and enlisted men of the militia thoroughly instructed in installing and operating these bakeries under field conditions. The necessary training for operating field bakeries could be given in connection with the course of instruction in the school for bakers and cooks, the handling of the field bakery being a part of the regular course in all the schools. In time of war bakers and cooks of the regular forces would be required with their own organizations and could not be depended upon to operate bakeries for militia divisions, who in this respect would have to depend entirely on their own efforts in supplying themselves with field bread. It is urged that every effort be made to induce these officers and men to take these courses of instruction which are open to them at all of the three schools.

Use of agricultural laboratories.—All depot quartermasters in the United States purchasing subsistence stores for the Army were notified on February 7, 1913, that they should avail themselves, whenever possible, of the invitation extended by the Chief of the Bureau of Chemistry, Agricultural Department, to make use of the facilities of the laboratories of that bureau in the various cities of the United States, for the purpose of testing food products with the view of ascertaining whether or not those purchased were wholesome and pure. The privilege of making use of these laboratories by purchasing officers of the Army was freely offered by the Agricultural Department, and a judicious use of this privilege will enable quartermasters purchasing food supplies for the Army to always secure the best class of stores.

Alamo attachment.—The Alamo attachment for field range No. 1 has been adopted and instructions given to have all these ranges equipped with the Alamo attachment, thus adding about 50 per cent to the boiling capacity and about the same per cent to the life of the range. It adds very little to the weight in bulk of the oven when packed. The Alamo attachment was the invention of Capt. O. J. Charles, Seventeenth Infantry, United States Army.

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CONSTRUCTION AND REPAIR.

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The posts where the more important items of construction work were authorized are as follows:

Fort Bliss, Tex.: Hospital ward wing, isolation hospital, and temporary shelter for Cavalry troops.

Front Royal Remount Depot, Va.: Freight storehouse, colt stable, veterinary dip, colt sheds, etc.

Fort Huachuca, Ariz.: Barracks for two troops of Cavalry, four double sets of officers' quarters, addition to commissary storehouse, and addition to hospital.

Letterman General Hospital, San Francisco, Cal.: Disinfecting building, addition to detention ward, nurses' dormitory, and hydrotherapeutic ward.

Schofield Barracks, Hawaii: Continuing the constructions of barracks, stables, officers' quarters, etc., for Cavalry post and officers'

quarters for Infantry post; also construction of laundry building and permanent water and sewer systems.

Fort Shafter, Hawaii: Continuing the construction of hospital wards, from funds of the preceding fiscal year.

Walter Reed General Hospital, District of Columbia: Additional ward.

In the planning of barracks by this office during the past fiscal year plastering has been generally omitted in the interests of sanitation as well as economy. The use of hollow tile blocks in the construction of buildings has been found satisfactory. These blocks have been used at the Front Royal Remount Depot, and it is contemplated to use them in some of the proposed buildings at Fort Bliss, Tex., for which plans are now being drawn.

Shooting galleries and ranges.—The total amount appropriated under this head in the Army act for the fiscal year 1913 was $93,336, of which amount $3,450 was made immediately available for the purchase of additional land adjoining the military reservation of Fort D. A. Russell, Wyo.

The apportionments made from this amount are classified as follows:

Purchase of land at Fort D. A. Russell, Wyo	$3,200.00
Construction and permanent improvements on target ranges	34,609.01
Rent of ranges	2,483.28
Repair of ranges	29,384.62
General purposes in Philippine Islands	20,608.18
Unallotted balance	3,050.90
Total	93,336.00

The more important items of construction and improvements were $15,079.78 for construction of range at Fort Crook, $7,600 for reinforced concrete butts at Fort Bliss, $1,462.90 for two target houses at Fort Leavenworth, $4,603.38 for grading and filling in arroyo at Whipple Barracks, and $2,261.82 for improvements on ranges in the Hawaiian Islands.

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Roads and walks.—The total amounts apportioned for roads and walks from the appropriation for "Roads, walks, wharves, and drainage, 1913," were as follows:

Construction of roads	$203,523.55
Repair of roads	81,769.43
Construction of walks	20,245.63
Repair of walks	23,147.12
Total	328,685.73

During the year extensive road and walk work was undertaken at the various posts. Some of the more important projects were:

Fort Crockett, Tex	$8,010.30
Fort Sill, Okla	30,701.78
Presidio of San Francisco	13,900.00
Fort Stevens, Oreg	9,620.40
Fort Myer, Va	15,980.00
Fort Slocum, N. Y	4,629.40
Fort Leavenworth, Kans	5,000.00
Fort Casey, Wash	4,512.00

Congress having specifically set aside from the appropriation "Roads, walks, wharves, and drainage, 1913," the sum of $44,000 for the construction of a road from the south end of the new Highway Bridge across the Potomac River to the Arlington National Cemetery, Va., including the purchase of not to exceed 4 acres of land, for the necessary right of way, and $22,000 from the same appropriation for macadamizing the road upon the Government property between the United States governmental farm and the Arlington National Cemetery, this office immediately took the proper steps to have this construction carried out. On account of more filling on the right of way being necessary than originally contemplated, and the high cost of the land, it was found that to have accepted the lowest bids for the work would have exceeded the amount of the appropriation. It was therefore found necessary to reduce the width of the paved portion of both roads. It is estimated that to complete the roads to the width originally contemplated will require $11,000 additional. An estimate for this amount has been inserted in the 1913 general deficiency bill for the purpose.

There was also authorized specifically by Congress the sum of $3,600 for completing the macadamizing of the road between the city of Vancouver and the military post at Vancouver Barracks, Wash. This project was put under contract during the year at a cost of $3,568.

In order to reduce the cost of crushed rock for use in repairing roads at the various military posts in the vicinity of San Francisco, Cal., the old rock-crushing plant at Angel Island, Cal., was remodeled so as to operate electrically, at a cost of $14,211.85.

Railroads on military reservations.—In furtherance of the policy of the department to own all railroads on military reservations and to allow common carriers to connect thereto at the boundaries of the reservations and to facilitate the handling of supplies, and the entraining and detraining of troops at Fort D. A. Russell, Wyo., the sum of $46,100 was authorized during the year for the construction of railroad sidings, switches, etc. This amount will not complete the system, however, as a few additional spurs are necessary. The additional work is now being advertised with a view to its authorization from funds of the fiscal year 1914.

At Fort Leavenworth, Kans., to continue the work on the railroad terminal system at that post, the sum of $6,863 was authorized.

An appropriation of $50,000 was made by Congress for the construction of a railroad around the reservation at Fort Mason, Cal., to connect with the belt line operated by the State of California; but this money was not used, as Congress later granted authority to the Panama-Pacific Exposition Co. to construct the road in question.

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To remove breeding places for mosquitoes, an expenditure of $1,797.55 was authorized for ditching and draining, etc., on what is known as "Marshall reservation," Fort Moultrie, S. C.

For grading ground around the hospital at Fort H. G. Wright, N. Y., $2,400 was authorized.

The sum of $8,085 was expended for grading the parade ground at Fort Winfield Scott, Cal., and $3,208.50 for grading near drill hall, Fort Leavenworth, Kans. For placing top soil around the double

barracks at Fort Hancock, N. J., there was authorized the sum of $1,620.

The sums of $50,000 and $30,000 having been specially set aside under the appropriation "Roads, walks, wharves, and drainage, 1913," for filling low lands at Fort Taylor, Fla., and for filling ponds and swamps on Constitution Island, West Point, N. Y., this office proceeded to have the work contracted for, the first project at a cost of $49,600 and the latter $29,000.

Water and sewer projects.—The total amount apportioned from the appropriation for "Water and sewers, 1913," for the construction and extension of water and sewer systems, including water-distributing systems, filtration plants, and sewage-disposal plants in the United States, was approximately $257,499.07. There was also expended at Schofield Barracks, Hawaii, from the special appropriation for "Water system, Schofield Barracks, Hawaii," the sum of $112,200, making a total of $369,699.07 for water and sewer projects.

Water-supply systems.—At many of the posts it has been found necessary in recent years to increase the water supply, (1) on account of enlarging the garrisons, (2) on account of the installation of modern plumbing and the more liberal use of water for sprinkling and irrigating purposes, and (3) on account of the failure of the sources from which they were formerly supplied.

The sum of $112,200 was authorized from the special appropriation above referred to for Schofield Barracks, Hawaii, which was commenced in 1912. The whole system cost about $166,000.

Two new wells were drilled and a third deepened at Fort Bliss, Tex., at a cost of $14,600. A steel tank and trestle at Fort Niagara, N. Y., was authorized, at a cost of $9,175. New pump house, pipe line, etc., at Fort Sill, Okla., cost $20,300. A new water-supply system for the Front Royal Remount Depot, Va., was authorized, at a cost of $19,250.

Filtration plant.—At Fort Porter, N. Y., where the water supply is obtained from Lake Erie, it has become necessary to purify the water, and there was constructed during the year at this post a filtration plant, at a cost of $12,447.

At Fort Caswell, N. C., the water supply was improved by the construction of a distilling plant, installation of new boilers, etc., at a cost of $41,890.

Water-distributing systems.—The more important projects of this nature that were accomplished during the fiscal year are as follows:

Schofield Barracks, Hawaii	$19,000
Fort Lawton, Wash	1,700
Fort Winfield Scott, Cal	3,049

Sewer systems.—A new sewer system was constructed at Schofield Barracks, Hawaii, at a cost of $16,000, and extensions were made to the post systems at Jackson Barracks, La., $3,100; at Fort Huachuca, Ariz., $3,443; and at Fort Douglas, Utah, $5,600.

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Electric lighting systems and power plants.—Some effort has been made during the fiscal year to reduce the cost of operation of the Government plants at the various posts throughout the service. With this object in view, some time ago, Form No. 109, which was revised during the past year, was inaugurated. This form gives in a concise manner a report upon the operations of the various plants, and if the data

are carefully compiled and reported upon, such report will furnish valuable data to this office upon the operation of such plants. A careful inspection of the latest reports made on Form No. 109 indicates considerable inefficiency upon the part of the personnel operating such plants, and clearly indicates that a great amount of good work could yet be done in a direction which would result in annual savings of thousands of dollars. With a view to reducing the cost of operations of the plants and establishing them upon a uniform and, as near as practicable, commercial basis, this office has laid out a general scheme for having an engineer go to those plants which show a poor economy in operation, during slack periods in this office; this with a view to properly organizing and instructing the personnel relative to their work.

It is noted that a considerable improvement has already resulted due to the placing on duty at such plants of engineers, electricians, and firemen of the Quartermaster Corps. This personnel promises to be efficient and capable, and it is thought that by keeping a high standard of examination, within a short period the Quartermaster Corps will possess a corps of specialists well qualified and equal to any found in commercial practice.

In the operation of post lighting systems, and particularly that part relating to the exterior lighting, it is noted that 4,000 hours per year burning is authorized. Commercial practice provides in most communities and cities what is known as a moonlight schedule, which provides that lamps for exterior lighting should burn approximately 2,200 hours per annum instead of 4,000 hours, as had formerly been the practice in the service. With a view to reducing the cost of providing lighting at the posts, instructions were given to the department quartermasters to have included in all annual contracts for lighting a moonlight schedule wherever practicable; also to require such schedule to be put into effect at Army posts where current is furnished from post plants. There has been prepared a blueprint schedule showing in part the saving which will be made by the use of the moonlight schedule for exterior lighting. This schedule is incomplete for the reason that a number of contracts for the purchase of current have not been received. Where electric current is paid for by meter rates the saving has been estimated on the basis of a decrease of 40 per cent in the amount of current used, but where current is paid for on a flat rate per lamp this office can not estimate the saving which will be made until the contracts showing the new rates are all received.

However, considering the contracts for the fiscal year 1914 which have been received in the office, and assuming that a relative saving will be made at posts where current is furnished from post plants, it is estimated that the saving will be $19,078. It is thought, however, when all contracts have been received a total annual saving of $25,000 will be made.

The total amount expended from the appropriation "Regular supplies, 1913," for the construction and extension of electric lighting systems and power plants was approximately $44,642.88.

The more important items of work were as follows:

Fort Liscum, Alaska, material and labor for electric lighting system	$7,500
Fort Mason Supply Depot, installation of electric lighting system	15,700
Letterman General Hospital, installation of two 75-kilowatt turbine sets	8,370

The sum of $12,466.78 was also expended during the fiscal year from the special appropriation for "Military prison, San Francisco, Cal.," in street lighting and wiring buildings of new prison at Alcatraz Island.

Personnel operating power plants.—During the fiscal year arrangements were made with the office of the Chief of Coast Artillery whereby the following coordination of the personnel at Coast Artillery posts would be carried out:

WAR DEPARTMENT, O. C. S., C. A. D.,
October 26, 1912.

THE SECRETARY OF WAR:

After consideration of the second and third indorsements, it is recommended that the following general policy, incorporating the ideas of the Chief of Engineers, the Chief of the Quartermaster Corps, and the Chief of Coast Artillery on this subject, be approved by the Secretary of War:

1. To provide all batteries requiring power for fortification purposes, or in certain cases groups of batteries, and, in general, all searchlights, with suitable local direct-connected direct current generating sets, preferably gasoline or oil engine driven; these local plants to be so interconnected and provided with suitable reserve sets as to insure continuity and flexibility in service.

2. In general, in time of peace to purchase the power for the post lighting system and for other similar post purposes when it is in the interests of economy to do so; in such cases the habitual use of the two systems to be separate and distinct, but provision to be made for a "breakdown" service connection by means of which the fortifications can use the power of the post in emergency, or vice versa; wiring for this connection to be underground.

3. In case it is impracticable advantageously to purchase power for the post service and the fortification system is insufficient for that purpose, to install a central plant such plant to constitute a reserve for fortification purposes, the location and character of the plant to be decided upon by the Chief of Engineers, the Chief of Coast Artillery, and the Chief of the Quartermaster Corps.

4. To employ direct current for the post service systems in all cases except where transmission conditions are such as to render the use of direct current decidedly uneconomical.

5. In case power for post purposes is purchased, a sufficient reserve plant to be installed by the Quartermaster Department, if the fortification system does not provide such a reserve, to provide for the actual necessities of the post in time of hostilities in case of interruption to the supply of commercial power.

6. In general, to provide for interchangeability between the post and fortification power systems. In case alternating current is used for post purposes, the reserve plants contemplated in the preceding paragraph should consist of suitable alternating-current generators, and provision should be made by the installation of suitable converters or motor generators for the conversion of alternating into direct current, and vice versa, the installation of the converting apparatus to be made by the department charged with the installation of the sytem to be served by the converted power.

7. In general, to insure coordination and to prevent a division of responsibility in case of emergency, all power plants to be operated under the supervision of the Coast Artillery authorities, employing, whenever practicable, Coast Artillery enlisted personnel for that purpose."

The results that may be expected from the following out of this policy may be briefly summarized in the statement that such policy will prevent a duplication of personnel.

Relative to so much of the policy relating to converting apparatus at Coast Artillery posts, this office has under consideration a plan to install without delay at all places wherever practicable suitable converting apparatus in order that power may be converted from quartermaster plants for use of fortifications, or vice versa from fortification plants for post purposes. Such a policy will not only result in economy so far as personnel is concerned, but also in the

fuel and other operating expenses of the plants concerned, all costs of which are chargeable to the appropriation of the Quartermaster Corps.

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Annual repairs to buildings, etc.—Based on the estimates of March 1, 1912, received from military posts and depots apportionments were made to departments and independent posts for annual repairs to buildings and systems, and allotments were made to each post by the division commanders within the limit of the funds available. Instructions were also given to retain a reserve balance in each department to meet unforeseen contingencies. The total amount apportioned for annual repairs from each appropriation of the fiscal year 1913, not including the Philippine Islands, was as follows:

Barracks and quarters		$584,549.67
Military post exchanges		17,440.36
Regular supplies:		
Reservation fences	$7,496.05	
Heating plants, exterior heating systems, and heating within buildings	52,631.84	
Steam-cooking systems	320.00	
Lighting plants, exterior lighting systems, and lighting within buildings	44,815.19	
Bakery buildings	3,511.12	
Ice and refrigerating plants	1,884.00	
Laundry buildings	1,157.00	
		111,815.20
Water and sewers:		
Fire apparatus	11,601.01	
Water systems and pump house	38,356.36	
Plumbing in buildings	98,027.00	
Sewerage systems, sewage-disposal plants, and crematories	10,937.84	
		158,922.21
Roads, walks, wharves, and drainage:		
Roads, curbs, gutters, and railroad tracks	60,300.00	
Walks	23,147.12	
Wharves	33,595.00	
Seawalls, retaining walls, drains and drainage	9,163.60	
Improvement of grounds	30,885.00	
General purposes in Alaska	3,600.00	
		160,690.72
Incidental expenses:		
Flagstaffs, picket lines, and electric-bell systems	4,032.00	
		4,032.00
Shooting galleries and ranges (including improvements)		32,635.71
Construction and repair of hospitals		78,189.59
Quarters for hospital stewards		5,519.96
Army transportation for railroad equipment and rolling stock		1,863.54
Total		1,155,658.96

Special repairs to buildings, etc.—In addition to the annual apportionments above stated, expenditures were authorized in the course of the past fiscal year for special repairs (the necessity for which could not be anticipated when the annual estimates were prepared) and for alterations and improvements on buildings, systems, and grounds at the various military posts and stations. The total amount expended from each appropriation for special repairs, alterations, etc., was approximately as follows:

Barracks and quarters (including screens, storm doors, etc.)	$62,246.56
Military post exchanges (including gymnastic apparatus and equipment)	11,310.67
Construction and repair of hospitals	74,382.47
Quarters for hospital stewards	2,411.35
Shooting galleries and ranges	3,763.74
Regular supplies	23,520.65
Water and sewers (including installations and renewals of plumbing in buildings)	25,062.50
Roads, walks, wharves, and drainage	46,530.88
Incidental expenses	1,067.46
Total	250,296.25

Wall lockers.—At the close of the fiscal year there had been reported shipped to military posts upon requisitions approved by this office 411 singles, 204 doubles, 237 triples, and 58 quadruples, or a total of 1,762 units. The cost of these lockers was defrayed from the appropriation "Barracks and quarters." Of the lockers above mentioned, 80 singles, 24 doubles, 34 triples were used in hospitals, thus making their cost ($2,069.94) chargeable to the appropriation "Construction and repair of hospitals," and the appropriation was accordingly reimbursed in that amount.

Losses by fire.—During the past fiscal year a quartermaster stable building at Fort Totten, N. Y., was destroyed, except brick walls, loss estimated at $6,000. At Fort Snelling, Minn., a hay shed built in 1904 at a cost of $3,600 was totally destroyed. At Columbus Barracks, Ohio, a barrack building was damaged to the extent of $4,000. At the Presidio of San Francisco, Cal., seven frame noncommissioned officers' quarters and an officers' bathhouse in the west cantonment were totally destroyed, loss estimated at $3,500. At several other posts buildings were slightly damaged by fire.

Rentals.—The total amount expended from the appropriation "Barracks and quarters, 1913," for the rental of quarters, storehouses, offices, stables, recruiting stations, drill grounds, camp grounds, etc., was $459,198.12 (this amount includes $70,000 apportioned the Philippine Islands for rental of quarters, etc., for troops in China). One room each was hired for approximately 460 noncommissioned officers on duty at posts for whom public quarters were not available, and for noncommissioned officers and privates on duty in cities under proper orders. Some of these leases were for only a portion of the year. Except where furnished in kind, heat and light for these rooms were included in the leases. Quarters with heat and light were rented at the lowest obtainable rates, ranging from $12 to $20 per month.

The regulation number of rooms were hired for the year, or portion of the year for 48 commissioned officers, including 25 in El Paso, Tex., 15 in Washington, D. C., and 5 at Vancouver Barracks, Wash. The rental per room ranged from $8 to $14 per month.

For stabling private mounts 102 leases were executed, mainly for periods of less than one year. The average rental was $10 per horse per month.

The rental of main and auxiliary recruiting stations for the year (not including lodgings) amounted to approximately $133,238.92.

Storehouses and office rooms were rented during the year in Atlanta, Boston, Chicago, Honolulu, New York, Portland, Oreg., Seattle, and

Washington, D. C. Storehouses were also rented in Galveston and Texas City, Tex., and office rooms in Denver and San Francisco.

For the fiscal year 1913 Congress appropriated $49,587 under the head of "Rent of buildings, Quartermaster's Department," to cover rentals in the District of Columbia, including Field Medical Supply Depot, Army Medical School, Depot Quartermaster's Office, stables, storehouses, and quarters for officers, noncommissioned officers, and privates. The total amount expended from this appropriation was $47,107.65, leaving an unexpended balance of $2,479.35.

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The more important land purchases were at Fort Sam Houston, where $70,000 was paid for about 310 acres adjacent to the reservation, and at Plattsmouth, Nebr., where $24,000 was paid for 696 acres for a rifle range.

Philippine Islands.—From statements rendered by the Department Quartermaster, it appears that the total amount expended for each class of work from the regular annual appropriations and from special appropriations for construction work were as follows:

Construction	$1,260,447.43
Repairs	159,436.04
Rentals	35,972.92
Services	485,470.81
Total	1,941,327.20

The total amount expended for the construction work included $213,571.77 from the appropriation "Barracks and quarters, Philippine Islands," for work at various posts; $871,384.73 from the appropriation "Seacoast defenses, Philippine Islands and Hawaii," for work at Fort Mills; and $90,767.55 from the appropriation "Army storehouses, Corregidor, Philippine Islands," for the construction of storehouses and other buildings on Corregidor Island prior to March 11, 1913, when all available funds pertaining to this appropriation were transferred to the Engineer Department.

On June 30, 1913, the buildings under construction at Fort Mills, chargeable to the appropriation "Seacoast defenses, Philippine Islands and Hawaii" were 10 barrack buildings, 14 sets of officers' quarters, 4 hospital buildings, 1 hangar, and 1 car barn.

In his annual report dated August 4, 1913, the department quartermaster reports that a contract amounting to $63,700 has been let for the reconstruction of Pier No. 1 and double grain warehouse at the Manila port reservation, also that the sum of $44,516.18 was expended during the past fiscal year on the Keithley-Overton road, and that the entire road is nearly completed.

The department quartermaster states that the southern islands suffered severely during the year from typhoons, the damage at military posts in the department being estimated at $60,000.

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TRANSPORTATION.

WATER.

Army transport service.—The service now consists of 18 ocean-going vessels, owned and operated as required for the transportation of troops, animals, and supplies for the Army. These vessels were engaged in service or stationed at the close of the fiscal year as follows:

Name.	Class.	Location.
Pacific Fleet.		
Buford	Troop ship	Out of commission, San Francisco.
Burnside	Cable ship	Undergoing repairs, navy yard, Puget Sound.
Crook	Troop ship	Out of commission, San Francisco.
Dix	Freight and animal ship	Trans-Pacific service.
Logan	Troop ship	Do.
Sheridan	do	Out of commission, San Francisco.
Sherman	do	Trans-Pacific Service.
Thomas	do	Do.
Slocum	Tug	In service, San Francisco Harbor.
Atlantic Fleet.		
Kilpatrick	Troop ship	At Galveston, Texas.
McClellan	do	Do.
Meade	do	Do.
Sumner	do	Do.
Philippine Fleet.		
Liscum	Troop ship	Undergoing repairs, Shanghai, China.
Merritt	do	Inter-island service.
Seward	do	Out of commission, Manila, P. I.
Warren	do	Inter-island service.
Wright	do	Do.

Movement of transports.—There have been monthly sailings from San Francisco and Manila throughout the year, although the regularity of such sailings has been somewhat interfered with by delays incident to the service.

The *Sheridan* was placed in commission and sailed in consort with the *Logan* on January 6, 1913, the two ships carrying the entire Fourth Cavalry, Twenty-fifth Infantry, and three companies of Coast Artillery Corps to Honolulu, and returned in consort with the *Sherman*, having aboard the entire Fifth Cavalry en route to station in the United States.

On May 24, 1913, the *Thomas* left San Francisco for a special trip to Honolulu, carrying two companies of Coast Artillery, one company of Signal Corps, and 975 recruits, and upon return to San Francisco resumed her regular service to the Philippines.

In February, 1913, the *Kilpatrick*, *McClellan*, and *Sumner* were hurriedly prepared for sea and dispatched for Galveston, Tex., and the *Meade* reached the same port on March 5, 1913, after transporting 1,379 officers and enlisted men, United States Marine Corps, from Philadelphia, Pa., to Guantanamo, Cuba. These vessels have remained at Galveston since that time ready for service if needed.

REPAIRS.

San Francisco.—The transports in operation from this port have been maintained in proper condition for active service by repairs at the end of each round trip, which have averaged in cost $3,556

per vessel for each voyage. The *Sherman*, *Buford*, and *Crook* have, however, been more extensively overhauled during the year, at a cost of $78,633.01, $80,958.82, and $17,455.15, respectively, to place them in satisfactory shape for service if required.

Seattle.—It was necessary to install new boilers in the *Burnside*, which, with other repairs, have cost during the year the sum of $104,148.42, while alterations and necessary repair work upon the *Dix* have amounted to $38,159.79.

Newport News.—The total cost for repairs in connection with the Atlantic fleet at both Newport News and Galveston have aggregated as follows: *Kilpatrick*, $2,212.10; *McClellan*, $1,598.45; *Meade*, $3,947.19; *Sumner*, $4,641.51.

Life-saving equipment.—On June 14, 1912, an act of Congress was approved appropriating $300,000, or so much thereof as might be necessary, to equip all Army transports with life boats and rafts necessary to accommodate every person for whom transportation facilities were provided on the said transports and the crews thereof; and with a view to giving careful consideration to this subject and determining the most practicable and advisable way of carrying out the provisions of the law above mentioned, for the transports owned and operated by the War Department, three boards were appointed by the Quartermaster General on July 27, 1912, one board to consider the question for Atlantic coast transports, one board to consider the question for Pacific coast transports, and one board to consider the question for vessels stationed in the Philippines.

These boards examined the various kinds of life-saving apparatus available and submitted for their consideration; also made various tests and trials at sea; their reports being submitted to the Chief of the Quartermaster Corps with recommendations regarding equipment considered most satisfactory and suitable for use on vessels of the transport service to fully provide satisfactory boatage for all passengers and crew for whom the vessels were otherwise fitted.

In accordance with the recommendations of these boards, contracts were executed for the construction and delivery of 176 new steel lifeboats of the Lundin decked, self-bailing type; also 87 pairs of Welin quadrant D davits; three steel self-righting and self-bailing power lifeboats; and the required number of boat chocks, gripes, fall blocks. etc., necessary to equip the transports with sufficient lifeboats to meet requirements. Contracts were also awarded for the necessary changes and other work required for the complete installation of the new equipment on the transports *Kilpatrick*, *McClellan*, *Meade*, and *Sumner*. The new equipment was installed on the trans-Pacific transports as rapidly as delivered at San Francisco while the vessels were at home port between voyages, keeping the equipment in excess of the number of passengers and crew transported.

Service for other departments.—There have been carried by transports during the year for other executive departments and for the Philippine Government passengers and freight the value of which at tariff rates would be as follows:

Navy Department	$389,457.50
Post Office Department (including 452,093 pounds mail)	197,461.79
Philippine Government	109,428.17
Other departments	1,008.06
Total	697,355.52

Work of transports.—The following is the summary of the work performed by transports during the year:

PASSENGERS.

Between—	Sailings.	Officers.	Enlisted men.	Civilians.	Total.
United States and Philippines	12	324	3,334	976	4,634
Manila and United States ports	12	331	4,785	1,958	7,074
Seattle and Manila	2	.....	3	2	5
Interisland ports	1	.....	12	5	17
Alaskan ports and United States	1	18	402	32	452
Cuban ports	1	43	1,336	1	1,380
Other ports	4	466	5,554	2,877	8,897
Total	.....	1,182	15,426	5,851	22,459

CARGO.

Between—	Animals.	Freight, tons.	Remains.	Lumber.	Mai pounds.	Money, pesos or dollars.
United States and Philippines	.....	29,232	.....	140,100	235,632	675,062.50
Philippines and United States	.....	10,476	83	.....	76,944	332,995.40
Seattle and Manila	251	17,666	.....	49,815	817	.....
San Francisco and Honolulu	.....	8,796	.....	.....	43,298	.....
Other ports	192	5,565	20	141,433	95,402	.....
Total	443	71,735	103	331,348	452,093	1,058,057.90

Earnings and expenditures.—The net earnings of the transports during the year for the above service, based on the lowest rates offered for similar services for commercial lines, have been:

For passengers	$1,323,352.45
For cargo	655,394.93
Total	1,978,747.38

At public commercial rates the earnings would be:

For passengers	$1,323,537.45
For cargo	655,394.93
Total	1,978,932.38

The foregoing does not include the value of transporting families of officers, soldiers, or employees, or of other persons not entitled to transportation from an appropriation of the United States or the Philippine Government. The value of such gratuitous service during the year, however, aggregated $450,820.60.

The expenditure for the operation and maintenance of the transports during the year was as follows:

	In commission.	Out of commission.	Total.
Wages of officers and crews	$563,914.15	$47,175.05	$611,089.20
Repairs	192,067.07	186,457.04	378,524.11
Coal	304,013.30	2,042.35	306,055.65
Deck, engine, and stewards' supplies	413,127.98	5,471.77	418,599.75
Miscellaneous	90,492.21	13,893.07	104,385.28
Total	1,563,614.71	255,039.28	1,818,653.99

Shore expenses, including proportionate salaries of officers, commutations of officers' quarters, wages of employees, rent of offices, warehouses, wharves, etc., were as follows:

San Francisco	$40,782.02
Seattle and Tacoma	7,260.66
Newport News	7,862.04
Honolulu	5,643.94
Nagasaki	12,636.37
Manila	12,256.82
Total for this purpose	86,541.85
Total for operation and maintenance	1,818,653.99
Grand total	1,905,195.84

Included in these expenditures is the cost of operating the *Burnside* while engaged in cable work for the Signal Corps of the Army, the total of which was $177,157.33.

Inasmuch as the service rendered by the *Burnside* was not performed in the interests of the Quartermaster Corps, the expenditure therefor should be deducted, leaving the net cost to the Government on account of the transportation of troops, supplies, etc., and the maintenance of all transports, both active and inactive, during the fiscal year, $1,728,038.51.

RECAPITULATION.

	Lowest commercial rate.	Public commercial rate.
Earnings of the transports during the year	$1,978,747.38	$1,978,932.38
Expenses of operation and maintenance during same period	1,728,038.51	1,728,038.51
Savings to the Government by using transports over same service by commercial vessels	250,708.87	250,894.87

COMPARATIVE STATEMENT.

	Carried upon transports.		Earnings.	Expenses.
	Officers and enlisted men.	Freight, tons.		
1912	30,220	48,191	$2,968,481.43	$1,602,429.23
1913	16,608	71,735	1,978,747.38	1,728,038.28
In favor of 1912	14,612		989,739.05	
In favor of 1913		23,544		125,609.28

HARBOR BOAT SERVICE.

Owned service.—The department has operated during the fiscal year in the various harbors along the Atlantic, Pacific, and Gulf coasts 6 first-class steel mine planters, 2 cable steamers, 2 ferry steamers, 24 passenger and freight steamers, 28 tugs and artillery steamers, 3 lighters, 39 steam, gasoline, and electric launches, and 27 junction-box launches; a total of 131 owned vessels engaged in Quartermaster, Artillery, and Signal work, at a total expenditure for wages of officers and crews, fuel, supplies, repairs, water, etc., of $1,092,804.97.

These vessels carried during the year 2,410,244 passengers and 158,331,007 pounds of freight.

Chartered service.—To supplement the above service, chartered vessels were operated in connection with the coast defenses of Narragansett Bay, between Newport and Fort Greble, R. I., at a cost of $11,955, and in connection with the coast defenses of Charleston, between Wilmington and Fort Caswell, N. C., at a cost of $1,944. The entire cost of the chartered service, including the cost of the hire of substitute vessels for short periods to replace owned vessels undergoing repairs and of vessels for towing targets, vessel tracking, subcaliber practice, and like purposes for the Coast Artillery, which could not be performed by the other vessels of the service, amounted to $20,196 during the fiscal year.

There were no unserviceable vessels condemned and sold during the fiscal year.

There were no new vessels constructed or purchased during the fiscal year.

PHILIPPINE INTER-ISLAND SERVICE.

Owned service.—Fifty-three voyages to various ports in the Philippine Islands and to China were made by the regular owned inter-island transports *Liscum*, *Merritt*, *Warren*, and *Wright*, and by the commanding general's dispatch boat *El Aguila*, upon which were transported during the year 17,650 passengers, 1,621 animals, 17 remains, 50,826 tons freight, 1,791,739 feet of lumber, and $1,114,779.13 United States currency entitled to Government transportation, the cost of which at commercial rates would be $413,060.77. There were also carried 6,276 passengers and 3,411 tons freight for which no credit was taken. The expenses of the service amounted to $445,573.98. After allowing the proper proportion for shore expenses chargeable to this service ($64,007.83) the net loss to the Government in the operation of the owned service over the cost of similar service at commercial rates was $96,521.04.

The army stationed in China has been provided with necessary supplies during the fiscal year by periodical voyages of the *Warren*. There were carried on those trips 22 officers, 322 enlisted men, 38 civilian employees, 5 animals, 3,700 tons supplies, and $216,845 in United States currency.

While the *Liscum* was undergoing extensive repairs at Shanghai, China, the transport sank August 26, 1912, at the dock of the firm making the repairs and was not finally raised until May 25, 1913. The cause and responsibility for the sinking has not yet been determined. The contract provided that any damage done the vessel should be made good by the contracting firm. After return to the Philippines the *Liscum* will replace the *Wright* at Zamboanga.

The *Seward* has been out of commission during the entire year, and recommendation has been made that the *Wright* and *Seward* be sold or otherwise disposed of, as they are unseaworthy and their condition will not warrant large expenditures necessary for continuance in the service.

Chartered service.—The *Samar* was under charter as a dispatch boat for the commanding general, district of Mindanao, with station at Zamboanga, from the beginning of the fiscal year until January 18, 1913, when replaced by the transport *Wright*. The vessel transported 608 passengers and 2,646 tons of freight, the cost of which

at commercial rates would be $10,336.65. There were also carried 373 passengers and 9 tons freight for which no credit was taken.

The total expense of the chartered service was $21,565.89. After charging a fair proportion of the expenses of the shore establishment ($2,723.74) the net loss connected with the service was $13,952.98.

RECAPITULATION.

	Earnings.	Expenditures.
Pacific and Atlantic service	$1,798,747.38	$1,728,038.51
Philippine owned service	413,060.77	509,581.81
Philippine chartered service	10,336.65	24,289.63
Total	2,402,144.80	2,261,909.95
Net earnings of the entire transport service		140,234.85

Philippine harbor-boat service.—There have been maintained and operated at Manila and other points in the Philippine Islands during the fiscal year 51 owned launches and 158 lorchas, colliers, scows, and small boats, at a total cost of $344,711.61, including the proper proportion of the expense connected with the maintaining of the shore establishment. There were transported 371,196 passengers and 15,331,676 pounds of freight.

No vessels were constructed or purchased during the year. Ten launches were sold and a number of scows and smaller craft wrecked, destroyed, and sold. The total sum realized from such sales aggregated $15,102.34.

It was necessary to supplement the owned service with chartered lighterage during the year.

* * * * * * *

LAND.

Freight and passengers.—During the fiscal year there were transported by the Quartermaster Corps 116,774 passengers, 15,060 animals, 324,448 tons of freight, $5,192,089.78 in funds, and 220 remains of officers, enlisted men, and civilians, as shown by the following statement:

	Railroad.	Commercial vessels.	Wagon.	Stage.	Express.	Total.
Passengers.						
Officers	4,677	91	214	12	.....	4,994
Enlisted men	102,256	4,056	824	167	.....	107,573
Civilians	3,847	342	15	3	.....	4,207
Total	111,050	4,489	1,053	182	.....	116,774
Animals.						
Horses	10,139	388	1	.....	53	10,581
Mules	4,329	150	.....	.....	.....	4,479
Total	14,468	538	1	.....	53	15,060
Stores (tons).						
Quartermaster Corps	177,884	35,364	11,852	.....	978	226,078
Ordnance	29,966	12,025	1,764	.....	30	43,785
Medical	1,303	1,772	12	.....	9	3,096
Engineer	1,560	1,797	37	.....	1	3,395
Signal	1,753	919	11	.....	8	2,691
Miscellaneous	13,223	2,551	29,627	.....	2	45,403
Total	225,689	54,428	43,303	.....	1,028	324,448
Remains	78	4	2	.....	136	229
Funds	.....	$130,834	$4,124	.....	$5,057,131.78	$5,192,089.78

This statement indicates a decrease of 12,780 passengers from those transported during the fiscal year 1912, and an increase of 1,971 animals and 70,408 tons of freight. The decrease in number of passengers transported is due to the establishment of a colonial army for permanent service in the Philippine Islands, thereby reducing the number of troops requiring transportation between stations in the United States and the Philippine Islands. The increase in the number of animals and tons of freight transported is due to the mobilization of troops at Galveston and Texas City, Tex., requiring the large shipments of means of transportation and supplies for their use at mobilization camps. Quartermaster Corps supplies show an increase of 59,839 tons over shipments during the fiscal year 1912. Ordnance stores, an increase of 14,613 tons, due to shipments of heavy ordnance to the Philippine Islands, Hawaiian Islands, and Canal Zone. Medical stores, an increase of only 49 tons. Engineer stores, an increase of 820 tons. Signal stores, an increase of 94 tons. Miscellaneous stores (stores for other departments of the Government), an increase of 6,103 tons. No charge for transportation is made against the Quartermaster Corps appropriations for transportation of miscellaneous stores, the charges being paid from appropriations of the departments concerned.

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Test of automobile trucks.—Continuing the observations upon the operations of automobile trucks in use in the Army, with a view to determining under what conditions it is practicable to use such trucks in the Army in place of animals-drawn transportation, as at present, up to the present time all reports and observations are practically unanimous that the best type of truck for Army use over rough trails and country roads, and able to operate under all conditions, is the shaft-driven truck of comparatively light weight and capacity about equal to that of the Army escort wagon.

The Quartermaster Corps has adopted general specifications for automobile trucks, which provide for a maximum weight of 5,000 pounds for truck complete, and the carrying capacity has been fixed at 1½ tons, with a safe overload of 20 per cent.

No extensive special runs have been made by the Quartermaster Corps during the fiscal year for the purpose of testing out any particular truck, but all trucks in the military service have been carefully observed and reported upon, with a view to determining their efficiency, stability, and economical operation.

No effort has been made to avoid difficult road conditions in the operation of these trucks; nor, on the other hand, has any special test been made of extreme road conditions, the desire being to find out what the trucks will do, as nearly as possible, under service conditions.

The Quartermaster Corps has not yet arrived at definite conclusions as to all the features that will best meet the requirements for military purposes, but a number of conclusions have been reached and further tests are constantly being made at maneuver camps, and it is expected that ultimately a standard type of automobile truck can be adopted which will be satisfactory as a means of transportation of supplies, except for that portion which it is contemplated shall be kept in constant contact with troops.

During the fiscal year six automobile trucks were purchased at various Quartermaster Corps depots and maneuver camps in the United States and one in the Philippine Islands.

It is intended that wherever automobile trucks are operated a corresponding reduction of animal-drawn transportation will be made.

Test of wagons.—Six types of wagons, viz, regular Escort wagons, old Army Six, a Milburn, a Kentucky, a Holzbog, and a wagon designed by Trainmaster Purcell, Quartermaster Corps, were tested by the Cavalry equipment board at Fort Riley, Kans., on a march of 455 miles, 20 marching days. The following table shows the conclusions of the board with reference to these wagons:

Features as to carrying capacity and traction.	Army Six.	Purcell.	Escort.	Holzbog.	Milburn.	Kentucky.
Tare weight of wagon	2,290	2,370	2,100	2,580	2,360	2,450
Average daily load carried, pounds	4,000	2,800	2,500	2,500	2,500	2,500
Animals per wagon	6	4	4	4	4	4
Dimensions of bed, inches:						
Length	122	140	114	129½	129½	129½
Width	42	43½	40	48	42.6	46
Height	21	27	21	19	22.8	21.4
Grease used, pounds	3	5 qts. oil.	2½	4	6	6
Number of times stuck in mud						
Height of front wheels	44	46	44	36	38	38
Times turned over						
Parts replaced						
Number of delays						
Condition at start	Good.	Good.	Good.	Good.	Good.	Good.
Condition at finish	Good.	Good.	Good.	Good.	Good.	Good.
Relative rank as to ease of pull	1	2	3	4	5	6
Relative rank as to general excellence	1	2	3	4	5	6

The weight of the Purcell wagon could be reduced by about 100 pounds by taking out the double bottom with which it has been equipped on some past occasion for some special purpose. This wagon is sufficiently heavy to haul five or six thousand pounds and would make a fine wagon for six mules. In general, it appears that the tare weight of each type of wagon was in excess of what is necessary for the load carried. Even the Escort wagon at 2,100 pounds is about one-third heavier than the commercial wagon designed for the same or heavier loads. There are several types of ordinary farm wagons guaranteed by makers for loads of 5,000 to 6,500 pounds, and which only weigh in the neighborhood of 1,500 pounds. While this is probably a trifle too light for Army use, it is believed that a reduction to the neighborhood of this figure could be approximated.

The mules on the Escort, Purcell, and Army Six wagons were in good shape at the end of the test. Some of the mules on the other wagons were in bad shape. The Kentucky wagon was the heaviest puller. All were four-mule wagons except the Army Six. The Purcell wagon had a carrying capacity which would have permitted a heavier load, and had its load been increased to 4,500 pounds and the number of mules to six, its superiority over the Escort wagon would have been more marked and its inferiority to the Army Six but slight.

From the evidence developed during the march the board is of the opinion that the relative rank of the types of wagons tried is, as to general desirability for field service, as follows: Army Six, Purcell, Escort, Holzbog, Milburn, Kentucky.

Consolidation of disbursing offices settling railroad and steamship companies' transportation accounts.—As shown in the annual report of the Quartermaster General for the fiscal year 1912, the disbursing offices of the Quartermaster's Department were on July 1, 1912, reduced to four, viz: Depot Quartermaster, Washington, D. C.; Chief Quartermaster, Central Division, Chicago, Ill.; Depot Quartermaster, St. Louis, Mo.; and the Depot Quartermaster, San Francisco, Cal. With the establishment of the depot of the Quartermaster Corps at Chicago, Ill., the accounts formerly settled by the Chief Quartermaster, Central Division, Chicago, Ill., were transferred to the Depot Quartermaster, Chicago, Ill., but no further consolidation of offices settling accounts was made during the fiscal year 1913. The reduction of the number of offices settling these transportation accounts from 15 to 4 has proven entirely satisfactory, and has resulted in economy and a better handling of transportation accounts of the various carriers concerned.

Schedule of land-grant and bond-aided railroads of the United States.—Circular No. 16, Quartermaster General's Office, was issued, effective July 1, 1912, carrying a complete list of the land-grant and bond-aided railroads of the United States, with the laws applicable thereto, and a map showing in colors the various railroads which had been granted lands or bonds by the Government to aid in their construction, in return for which transportation services for the Government are performed at reduced rates. This circular also contains a schedule showing other carriers operating over any of the land-grant portions of the land-grant lines and is of great assistance to the disbursing officers of the Quartermaster Corps settling transportation accounts as well as to the railroads of the United States.

Freight and passenger land-grant equalization agreements and list of carriers participating.—Due to certain changes in the agreements and additions to the list of carriers participating, it was found necessary to reissue circular containing this information, and Circular No. 6, O. C. Q. M. C., was therefore issued on March 1, 1913, containing freight and passenger equalization agreements and the list of carriers participating, as formerly shown in Circular No. 23, Q. M. G. O., 1911. Practically all the important carriers in the United States have agreed to accept the same net rates on both passenger and freight traffic of the Army as are effective via the land-grant lines. This is of great benefit to the Government, inasmuch as it allows a choice of routing over practically any line, instead of confining the Government to the use of land-grant lines in order to secure the rates available via such lines.

Conferences of the common carriers engaged in the transportation of passengers and freight for the Army.—During the fiscal year 1913 representatives of the Quartermaster Corps attended conferences of the various carriers concerned in the handling of transportation of the Army, with a view to adjusting any matters of controversy and also with a view to securing as low rates as possible. These conferences resulted in certain changes being made in freight classification which were of benefit to the Government and also in securing an adjustment of passenger rates out of Columbus, Ohio, and New York City, by which the War Department will be enabled to save about $5,000 per annum on passenger transportation out of these points.

A conference was also had at Chicago, Ill., with the representatives of all the western passenger lines in connection with the reissue of the military tariffs to cover all points west of Chicago and St. Louis between which there was any considerable volume of traffic for the War Department. On account of unsettled rate conditions in this territory the military tariff in question has not yet been reissued, but it is contemplated to reissue the same within the next few months. This tariff is of great benefit to the disbursing officers of the Quartermaster Corps and the carriers concerned, inasmuch as all the net fares established on the basis of the greatest land-grant deduction are published therein, obviating the necessity of the carriers and the disbursing officers figuring each of these fares in detail whenever any traffic moves.

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REMOUNT SERVICE.

Statement showing animals purchased by the Quartermaster Corps during the fiscal year 1913.

Kind.	Number.	Total cost.	Average cost.	
			1913	1912
Cavalry horses	1,070	$179,186.39	$167.46	$180.60
Artillery horses	31	5,874.50	189.50	259.18
Young horses, remounts	1,331	157,612.36	118.42	129.12
Draft horses	27	6,217.50	230.28	300.00
Draft mules	837	205,678.75	245.73	230.00
Draft mules, young	71	10,307.75	145.18	.....
Pack mules	230	43,346.00	188.46	209.16
Riding mules	87	18,276.50	210.07	209.38
Dogs	42	2,050.00	48.81	.....

The average cost of mounts for the year is $140.90.

During the year 1,740 animals were condemned, sold, etc., and 613 died, a total of 2,353 animals. There remained on hand on June 30, 1913: Cavalry horses, 12,118; Artillery horses, 3,155; draft horses, 1,009; riding horses, 1,527; draft mules, 5,881; pack mules, 1,478; riding mules, 382; bell mules, 13; dogs, 168; total, 25,731.

Fort Keogh Remount Depot, Fort Keogh, Mont.:	
Horses on hand July 1, 1912	789
Horses received during the fiscal year 1913	602
Total on hand and received	1,391
Issued during the year—	
Cavalry horses	483
Artillery horses	161
Riding horses	93
Sold to officers	15
Died	48
Otherwise disposed of	24
Total disposed of	824
Balance on hand, June 30, 1913	567
Fort Reno Remount Depot, Fort Reno, Okla.:	
Horses on hand July 1, 1912	513
Horses received during the fiscal year 1913	668
Total on hand, received	1,181

Fort Reno Remount Depot, Fort Reno, Okla.—Continued.	
Issued during the year—	
Cavalry horses	288
Artillery horses	18
Riding horses	12
Sold to officers	19
Died	20
Otherwise disposed of	11
Total disposed of	368
Balance on hand June 30, 1913	813
Young mules on hand	48
Front Royal Remount Depot, Front Royal, Va.:	
Horses on hand July 1, 1912	396
Horses received during the fiscal year 1913	286
Total on hand and received	682
Issued during the year—	
Cavalry horses	120
Riding horses	28
Sold to officers	34
Died	41
Otherwise disposed of	2
Total disposed of	225
Balance on hand June 30, 1913	457
Summary of remount depots:	
Horses on hand July 1, 1912	1,698
Horses received during the fiscal year 1913	1,556
Total on hand and received	3,254
Issued during the year—	
Cavalry horses	891
Artillery horses	179
Riding horses	133
Sold to officers	68
Died	109
Otherwise disposed of	37
Total disposed of	1,417
Balance on hand June 30, 1913	1,837

J. B. ALESHIRE,
Chief Quartermaster Corps.

REPORT OF THE SURGEON GENERAL.

WAR DEPARTMENT,
OFFICE OF THE SURGEON GENERAL,
Washington, August 30, 1913.

The SECRETARY OF WAR.

SIR: I have the honor to submit herewith a report upon the work of the Medical Department, with a study of the health and sanitary conditions of the Army for the calendar year 1912, and a financial statement for the fiscal year ending June 30, 1913. I desire at this point to invite especial attention to certain points of interest in this report.

Constantly noneffective rates.

The constantly noneffective rate, which is a statement of the average number of men in each 1,000 incapacitated for duty by disease or injury each day during the year, is the true measure of the loss in efficiency of the Army from disease and injury. By reference to Chart A, which shows these rates for the American Army from 1867 to 1912, inclusive, it will be seen that the rate for 1912 was by far the lowest on record in this office, noneffective rates not being compiled prior to 1867. Chart B, giving this same rate for disease only for the American Army, shows that the rate for 1912 was exactly the same as that for 1895 and only slightly higher than that for 1896, the lowest on record for our Army. In considering these rates it must be borne in mind, however, that prior to the Spanish-American War in 1898 our troops were not exposed to such a large extent to diseases incident to exposure to tropical climates. The rates prior to 1898 were for the United States only, and in reality to show the true health conditions now as compared with that period the rates for the United States alone should be considered. This rate for disease in the United States in 1912 was 22.57 per 1,000, which is much lower than the corresponding lowest Army rate, 25.23, for 1896. For the United States, continental, the total rate for disease and injury was the lowest recorded. In 1912 there were 150 less men constantly sick than in 1911, although the average strength in 1912 was 3,134 more than in 1911.

In the Philippine Islands the noneffective rate for American troops, both for disease and injury, was higher in 1912 than in 1911. The rate for disease was 39.85 per 1,000, while in the United States it was, as stated above, 22.57. Thus is shown in a striking manner the effects of tropical service upon the efficiency of the Army. In this connection attention is invited to the remarks of the tropical board on page 130 relative to the effects of tropical climates. It will be observed that Alaska maintained as usual its record of being by far the healthiest region where our troops are stationed.

Admission rates.

Chart C shows in a striking way the admission rates for disease and injuries for the American Army from 1819 (the year this office was established as a bureau of the War Department) to 1912, inclusive. By reference to this chart it will be seen that the admission rate for the American Army for 1912 was 823.94, the lowest on record. The rate for disease alone was 674.29, also the lowest recorded. It will be observed that this rate for disease for the United States, continental, was only 596.94 per 1,000. That for all causes was 738.70 per 1,000. These rates are very much better than any previous corresponding rates for the United States. In the Philippine Islands, however, due especially to an unusual prevalence of malarial fevers, the admission rate for disease in 1912 was higher than the corresponding rate in 1911. The rate for external causes showed a slight decrease. The admission rate for the American troops was higher in the Philippine Islands than in any other country where our troops are stationed. It will also be noticed that Alaska had by far the lowest admission rate as well as the lowest noneffective rate.

Discharge for disability.

The good effects of General Order 174, War Department, 1909, continue to be shown in a constantly decreasing rate for discharge on certificates of disability. Not only are some cases found fit or rendered fit for duty by treatment at general hospitals and recruiting depots,

where they are sent for discharge, but the fact that a board of medical officers must pass on each case has a deterring effect on post surgeons, who might be inclined in some cases to assist organization commanders to eliminate undesirable men from their organizations who are not really physically disqualified. Chart D shows that the rate for discharges for all causes for the total American Army was for 1912 the lowest since the Spanish-American War. It will be observed that the same remarks are true for the rate for disease for the American Army and for all causes for the troops stationed in the United States, continental.

Deaths.

While the rate for noneffectiveness, admissions, and discharges have shown a satisfactory improvement from year to year, the death rate has also improved. Chart E shows graphically that the death rate for all causes for the Army was lower in 1912 than in any previous year in the history of our Army, other than for the year 1910. However, by reference to Chart F it will be seen that the death rate for disease for the American Army was lower in 1912 than in 1910, and was moreover lower than the corresponding rate for any year on record.

While the general rates just mentioned for 1912 were very satisfactory, the rates for certain special diseases are especially gratifying.

Typhoid fever.

In 1912 only 18 cases of this disease occurred in that part of the Army stationed in the United States; of these 18 cases only 6 had received the prophylactic, while 5 of them occurred in recruits who were infected prior to enlistment and were in the incubation stage when enlisted. Three deaths occurred in the United States, none of which were in the cases immunized. Among the American and native troops there were in all 27 cases with 4 deaths in 1912 as compared with 69 cases and 8 deaths in 1911, the results for 1911 being at that time considered more than satisfactory. It appears at the present time that the figures for 1913 will be even more gratifying than those for 1912. At this date, August 30, not a single case has been reported among the enlisted men in the entire Army, American or native troops, since October 27, 1912. One case occurred in a medical officer, December 19, 1912. This officer had had a previous attack of typhoid fever and hence had not received the prophylactic. It seems more than marvelous that among the number of men in the camps at Texas City and Galveston, and among those in the numerous camps along the Mexican border, constantly exposed to infection, not a single case has occurred. During the last few months cases have been reported in several instances among the members of families of officers or enlisted men or other civilians at Army posts without a case occurring among the military personnel.

Venereal diseases.

It is very gratifying to this office to be able to state that as a result of the propaganda of education in the Army, of compulsory prophylaxis, with physical examinations, and of the stoppage of pay by act of Congress of men incapacitated by these diseases for duty, some control has apparently at last been secured over the occurrence of venereal diseases. The order from the War Department prescribing the compulsory prophylaxis with semimonthly physical inspection was published in General Order 17, May 31, 1912. The act of Congress for the stoppage of pay was published by General Order 31, September 12, 1912. Thus only a part of the year was affected by these two

measures. However, some beneficial results were obtained before these orders were issued by the actions of division and post commanders upon the recommendation of chief surgeons and post surgeons. The admission rate for the troops stationed in the United States for the year was very satisfactory, being 115.74 per 1,000, as compared with 145.29 per 1,000 in 1911. The rate for the first quarter of 1912 was 130 per 1,000, for the second 113, for the third 107, and for the fourth 91. Thus the beneficial effects of all the measures were shown toward the latter part of the year. The improvement in the noneffective rate was even more marked than that in the admission rate, this being only 5.96 per 1,000 in 1912, as compared with 8.82 for 1911. In the Philippine Islands the admission rate for the white troops showed a satisfactory improvement, but that for the colored troops was unusually high. The rate for the Army as a whole, both for noneffectiveness and admissions, showed a very satisfactory improvement. For the year 1913 the results will apparently be very much more satisfactory than even those for 1912. Thus, for the first six months in 1913 the annual admission rates for these diseases was 74.67 per 1,000. This is the lowest rate for these diseases since 1895. It should be remarked, in passing, that this rate includes all cases occurring, not only those excused from duty, but also all cases that were treated and recorded but not excused from any duty. Approximately one year after official action was taken by the War Department and by Congress, the admission rate for venereal diseases has been reduced about one-half. The rate in 1911 was 145.29 per 1,000; the annual rate for the first six months of 1913 was 74.67. It is believed that the time has come to hold commanding officers responsible for excessive venereal rates occurring at their posts, and especially for continued failure on the part of the men of the command to comply with the existing orders on the subject. If this were done and if the officers of the Inspector General's Department and the sanitary inspectors had orders to investigate strictly the results obtained at posts inspected by them, and to make special reports in cases where these results are not satisfactory, there is no doubt that a great and permanent improvement could be effected.

Tuberculosis.

While there is as yet no measure that can eradicate tuberculosis from the Army as the typhoid prophylactic has done for typhoid fever, nor control it as effectively as the present system of venereal prophylaxis is apparently controlling the occurrence of this class of disease, yet it is gratifying to be able to report that as the result of improved sanitation and of the care with which applicants for enlistment are examined, that the rate for this disease is steadily diminishing year by year.

Malarial fevers.

The admission rate for malarial fevers in the United States continues to steadily diminish. The admission rate for these fevers in the Philippine Islands was higher than it has been in any year since 1906.

Alcoholism

The rate for alcoholism in the United States for 1912 is the lowest since 1873, excepting that for the year 1898, which should be omitted, as it was a year of war, when such rates are usually low. The rate for the American troops in the Philippine Islands also showed a satisfactory decrease. During the year 1913 it is expected that the full benefit of the act of Congress for the stoppage of pay will be manifested and that there will be a still more marked decrease.

Improved camp sanitation.

Finally it is being demonstrated day by day in the camps at Texas City and Galveston that troops properly protected by vaccination against smallpox and typhoid fever can live in camps properly located with the present system of camp sanitation for an indefinite length of time without any increased morbidity among the troops. The system of the disposal of all excreta and garbage in camps is not only very satisfactory but very simple and inexpensive.

Increase of Hospital Corps.

I can not in transmitting this, my last, annual report fail to call your attention to one particular in which the Medical Department is unprepared to fulfill its responsibilities to the Army and the Nation. It is one which has been the subject of frequent communications from this office in the last few years and has been pointed out for several years in the annual reports—this is the great deficiency in number of the Hospital Corps; so that when the tactical divisions of the Regular Army take the field they can have not more than one-fourth of the sanitary units required for the medical service and called for by the Field Service Regulations. In fact the first division stationed in the Eastern Department has not a single sanitary unit. This matter is discussed quite fully on page 165 et seq. of this report. No action by Congress is necessary to remedy this defect, since Congress, in order that such a deficiency might be avoided, has placed in the hands of the President the responsibility for providing a sufficiently numerous Hospital Corps to care for the sick and wounded, and has specifically stated that they shall not be counted as a part of the strength of the Army. It is believed that Congress has thus shown the intention that our Army shall have an adequate medical service proportioned to its strength, and this is what I have repeatedly urged. It is also believed that if the Secretary would recommend to Congress the reorganization of the Hospital Corps, which is asked for in this report, it will be easily obtained and will much facilitate the recruitment of suitable men for this relatively unattractive service.

HEALTH OF THE ARMY.

International Nomenclature.

This is the first annual report of this office in which the diagnostic terms for diseases and injuries, adopted by the Medical Department in accordance with the International Nomenclature, are used with the international number. The nomenclature was published in C. M. M. D., December 7, 1911, for the information and guidance of all medical officers.

The International Nomenclature is used by most of the important foreign countries. It is also used by the Census Bureau in this country and by an increasing number of boards of health and large hospitals. It is reported that it will also be adopted by the American Medical Association.

In studying statistics for other countries, where the terms used are expressed in a foreign language, the International number furnish a ready key for their interpretation.

* * * * * * *

Admission Rates.

Prior to 1904 in compiling the statistics of this office for the Army all readmissions which were obviously for the same attack of the same disease were omitted. Thus if a man was admitted to hospital with a complication of gonorrhea, who had been returned to duty a short time before, after treatment for the same attack of this disease the readmission was not counted. From 1904 to 1911, inclusive (reports 1905–1912), all admissions were counted. In compiling the statistics for 1912 the rule followed prior to 1904 has been followed. In each report recently a table has been published showing for the Army the difference between the actual number of cases and admissions. In this report in making comparisons between cases and admissions the terms case admission (report 1913 and prior to the one for 1905) and total admission (reports 1905 to 1912, inclusive) will be used.

OFFICERS.

The mean strength of officers was 4,216, as obtained from the reports of sick and wounded of the Medical Department, and 4,690 from the office of The Adjutant General. There were 2,516 admissions, 24 deaths, and 105.08 constantly noneffective from all causes, equal to ratios of 596.78, 5.12, and 24.92 as compared with ratios of 596.92, 4.43, and 26.91 per 1,000 for the year 1911. The constantly noneffective rate was lower than for 1911, the admission rate slightly lower, and the death rate higher.

The principal causes of admission in the order of their importance were bronchitis, 42.93; diseases of the pharynx, 38.19; influenza, 37.95; diarrhea and enteritis, 35.82; diseases of the nasal fossæ, 29.89; malarial fevers, 25.14; diseases of the stomach (cancer excepted), 20.87; and dengue, 19.21 per 1,000.

OFFICERS RETIRED.

Twenty-two officers were retired on account of disability during the year, making a rate for retirement for disability of 4.69 per 1,000, as compared with 6.64 for 1911. The discharge rate for disability in enlisted men was 13.43.

The following table shows the principal causes for which retirement were made and the rank and age of the officers retired:

Table No. 1.—*Retirement of officers, United States Army, year 1912, for disability, by causes and rank, grouped by ages.*

	Total.		Ages of officers, quinquennial groups.								
	Number.	Ratio per 1,000 of all officers.	24 years and under.	25 to 29 years.	30 to 34 years.	35 to 39 years.	40 to 44 years.	45 to 49 years.	50 to 54 years.	55 to 59 years.	60 years and over.
CAUSES OF RETIREMENT.											
Organic disease of heart	4	.85	.....	.....	.....	.....	1	.....	2	1	.....
Deafness	3	.64	.....	.....	.....	.....	.....	2	1	.....	.....
Dysentery, amœbic	2	.43	.....	.....	.....	.....	.....	1	1	.....	.....
Tuberculosis, pulmonary	2	.43	.....	1	1	.....	.....	.....	.....	.....	.....
Paresis	2	.43	.....	.....	.....	.....	2	.....	.....	.....	.....
Neurasthenia	2	.43	.....	.....	.....	1	1	.....	.....	.....	.....
Nephritis, chronic interstitial	2	.43	.....	.....	.....	.....	.....	1	.....	1	.....
Rheumatism, chronic articular	1	.21	.....	.....	.....	.....	.....	.....	1	.....	.....

TABLE No. 1.—*Retirement of officers, United States Army, year 1912, etc.*—Continued.

	Total.		Ages of officers, quinquennial groups.								
	Number.	Ratio per 1,000 of all officers.	24 years and under.	25 to 29 years.	30 to 34 years.	35 to 39 years.	40 to 44 years.	45 to 49 years.	50 to 54 years.	55 to 59 years.	60 years and over.
CAUSES OF RETIREMENT—contd.											
Arterio-sclerosis, general	1	.21									1
Cataract, both eyes	1	.21							1		
Inguinal hernia, bilateral	1	.21				1					
Fracture, leg	1	.21				1					
RANK IN SERVICE.											
Colonel	2	.43								2	
Lieutenant colonel	4	.85						2	2		
Major	2	.43							1		1
Captain	10	2.13			1	2	4	2	1		
First lieutenant	1	.21				1					
Second lieutenant	1	.21		1							
Chaplain	2	.43							2		
Number of retirements	22	4.69		1	1	3	4	4	6	2	1
Number of officers in service	4,690		288	951	960	1,064	630	368	215	142	72
Ration per 1,000 of each group				1.05	1.04	2.82	6.35	10.87	27.91	14.08	13.89

There were 24 deaths with a rate of 5.12 per 1,000, as compared with 20 deaths with a rate of 4.43 in 1911.

The following table shows the causes of deaths of officers:

TABLE No. 2.—*Deaths of officers, United States Army, year 1912, by causes and rank, grouped by ages.*

	Total.		Ages of officers, quinquennial groups.								
	Number.	Ratio per 1,000 of all officers.	24 years and under.	25 to 29 years.	30 to 34 years.	35 to 39 years.	40 to 44 years.	45 to 49 years.	50 to 54 years.	55 to 59 years.	60 years and over.
CAUSES OF DEATH.											
Bright's disease	3	.64							1	2	
Organic disease of heart	2	.43						1		1	
Pneumonia	2	.43			1						1
Appendicitis	2	.43			1	1					
Gunshot wounds, suicidal	2	.43			1		1				
Crushing, by fall of aeroplane	2	.43		2							
Typhoid fever	1	.21					1				
Tuberculosis, pulmonary	1	.21						1			
Sarcoma of liver	1	.21						1			
Cancer of esophagus	1	.21									1
Diabetes	1	.21									1
Alcoholism, chronic	1	.21				1					
Embolism, cerebral	1	.21								1	
Sprue, chronic	1	.21								1	
Incised wounds by hostile Moros	1	.21				1					
Drowned at sea	1	.21						1			
Fracture of skull, fall from horse	1	.21		1							
RANK IN SERVICE.											
Brigadier general	1	.21								1	
Colonel	5	1.07								3	2
Lieutenant colonel	1	.21								1	
Major	6	1.28					1	3	1		1
Captain	3	.64				3					
First lieutenant	2	.43			2						
Second lieutenant	3	.64		3							
Chaplain	3	.64			1		1	1			
Number of deaths	24	5.12		3	3	3	2	4	1	5	3
Number of officers in service	4,690		288	951	960	1,064	630	368	215	142	72
Death rate per 1,000 of each group				3.15	3.13	2.82	3.17	10.87	4.65	35.21	41.67

TEST EXERCISES FOR FIELD OFFICERS.

Of the officers of field rank who were subject to the annual physical test, 7 were excused in 1912; in all 7 cases the disability was regarded as permanent.

ENLISTED MEN.

The mean enlisted strength of the Army, American troops, white and colored, for the year 1912, as reported on the monthly sick reports of the Medical Department, was 78,267, and on the returns of The Adjutant General's Office, 79,613. The former represents the strength of the commands from which the sick returns were made and was used in calculating all ratios except those for deaths and discharges. As all deaths and discharges were reported, even of those absent from a command, the total strength as obtained from The Adjutant General was used in calculating ratios pertaining to those headings. There was an increase in strength over the year 1911, for which the medical returns showed 72,748 and The Adjutant General's Office, 73,023.

During the year 1912 American troops were stationed in the United States proper, the Philippine Islands, China, Alaska, Hawaii, and the Canal Zone. Native troops served in Porto Rico and the Philippines.

Statistics for the native troops, Porto Rican and Philippine, have been separately compiled, and when reference is made to the "Army" in this report the American Army proper, white and colored troops, exclusive of native troops, is meant.

Charts, A, C, D, and E, were prepared in this office for the exhibit at the Fifteenth International Congress of Hygiene and Demography. They have been brought up to date and are published in this report so that they may be on permanent record. The corresponding historical table was published in the last report of this office, pages 14, 15, and 16, report 1912.

CONSTANTLY NONEFFECTIVE RATE.

Chart A shows the constant noneffective rate for all causes from the year 1867 to 1912, inclusive. This rate is the true measure of the loss in efficiency of the Army from sickness and injury. The rate for disease and injury obtained for the total American Army for the year 1912 was 30.10, as compared with 33.28 per 1,000 in 1911. The rate for 1912 is thus much lower than the rate for 1911, which was the lowest recorded noneffective rate in the history of the Army before the year 1912. In only two previous years has the noneffective rate for all causes been below 34. These years were 1895 and 1896, when the rates were 33.89 and 33.97, respectively.

Chart B, giving the total noneffective rate for diseases for the last 20 years, shows in a striking way the increase in sickness due to exposure to tropical climates, a condition subsequent upon the occupation of new territory during and since the Spanish-American War. It also shows a steady diminution in sickness after the first year of colonial expansion in 1898 with the steady advance in our knowledge of tropical disease and preventive medicine and the establishment of more sanitary conditions of living in our tropical possessions. It will

be seen by reference to this chart that the rate for 1912 was exactly the same as for 1895, 25.43, and only slightly higher than the rate for 1896, which was 25.23. This noneffective rate for disease for 1896 is the lowest on record in the Army. The corresponding rate for 1911 was 28.23. The highest noneffective rate on record was for the year 1898, when the total rate was 82.83 per 1,000 and the rate for diseases alone was 69.09. The progressive improvement from 1898 to 1911 was chiefly due to the sanitary control of infectious diseases, malarial fevers, typhoid, and dysentery. The very marked improvement in 1912 was due, largely, to the sanitary control of two diseases, typhoid fever and venereal diseases. As a result of the control of typhoid fever by immunization of the Army by the typhoid prophylactic and by the employment of proper sanitary measures, this disease ceases, apparently, to be a factor worthy of consideration as far as noneffectiveness in the Army is concerned. The noneffective rate for venereal diseases showed a very material reduction in 1912; this was a result of the propaganda of education which has been going on for several years and of General Order 17, War Department, May 31, 1912, prescribing a compulsory system of venereal prophylaxis and physical inspection, together with General Order 31, publishing to the Army the action of Congress in stopping the pay of men disabled on account of sickness due to alcoholism, drug addiction, and other misconduct (venereal diseases).

The diseases causing the highest noneffective rates were venereal diseases and tuberculosis (all). The rate for venereal diseases was 7.78 per 1,000 and that for tuberculosis (all) was 1.40. The noneffective rate for venereal diseases in 1911 was 10.14, and in 1910, 11.51. The rate for 1912, therefore, as stated above, shows a marked reduction. This rate would have been further decreased but for the enormous increase among the colored troops serving in the Philippine Islands, the noneffective rate there for these troops being 21.70 per 1,000 for venereal diseases alone. There were no colored troops serving in the Philippine Islands in 1910 and 1911. The total noneffective rate for venereal diseases for all colored troops in 1910 was 8.33; in 1911, 7.12, and in 1912, 11.11, while on the other hand, the total noneffective rate for white troops in 1910 was 11.65; in 1911, 10.27; and in 1912, 7.61.

ADMISSIONS TO SICK REPORT.

Chart C, giving the admissions to sick report for the Army since the year 1819, when the Office of the Surgeon General was first established as a bureau of the War Department, shows in a striking way the gradual decrease in the number sick or injured in the service. The case admission rate for all causes for the Army for 1912 was 823.94. By reference to the chart it will be seen that this is the lowest admission rate in the history of the Army. The highest admission rate on record for the Army was in 1841, when the total rate for all causes was 3,846.8, that for disease alone being 3,475.1.

The case admission rate for disease for the Army for 1912 was 674.29. The corresponding rate was 717 for 1911 and 787 for 1910. The rate for 1912 was the lowest admission rate for disease in the history of the Army. Table No. 81 shows the case admission and total admission rates for the Army, United States, and American troops, Philippine Islands, 1904 to 1911, inclusive.

Chart A.

Noneffective Rates, All Causes, for the Army, years, 1867-1912.

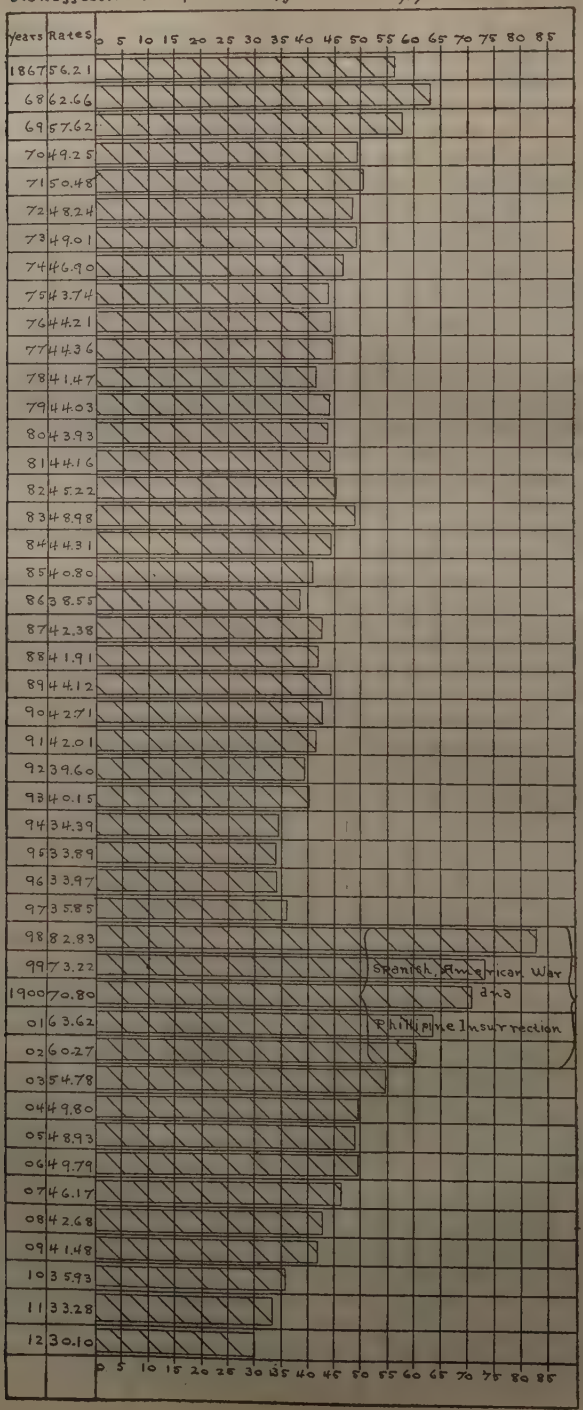


Chart B.

Noneffective Rates for Disease for the Army, American Troops {Enlisted Men} years 1893-1912.

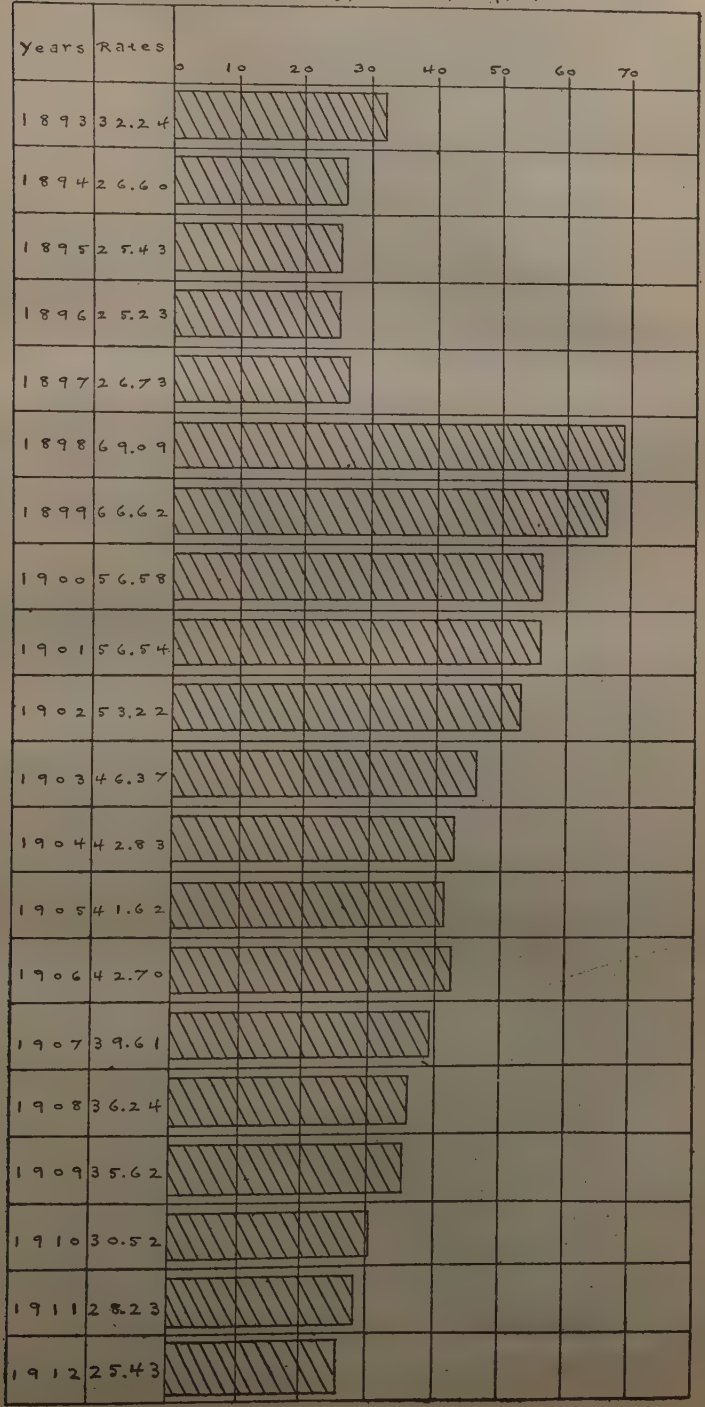
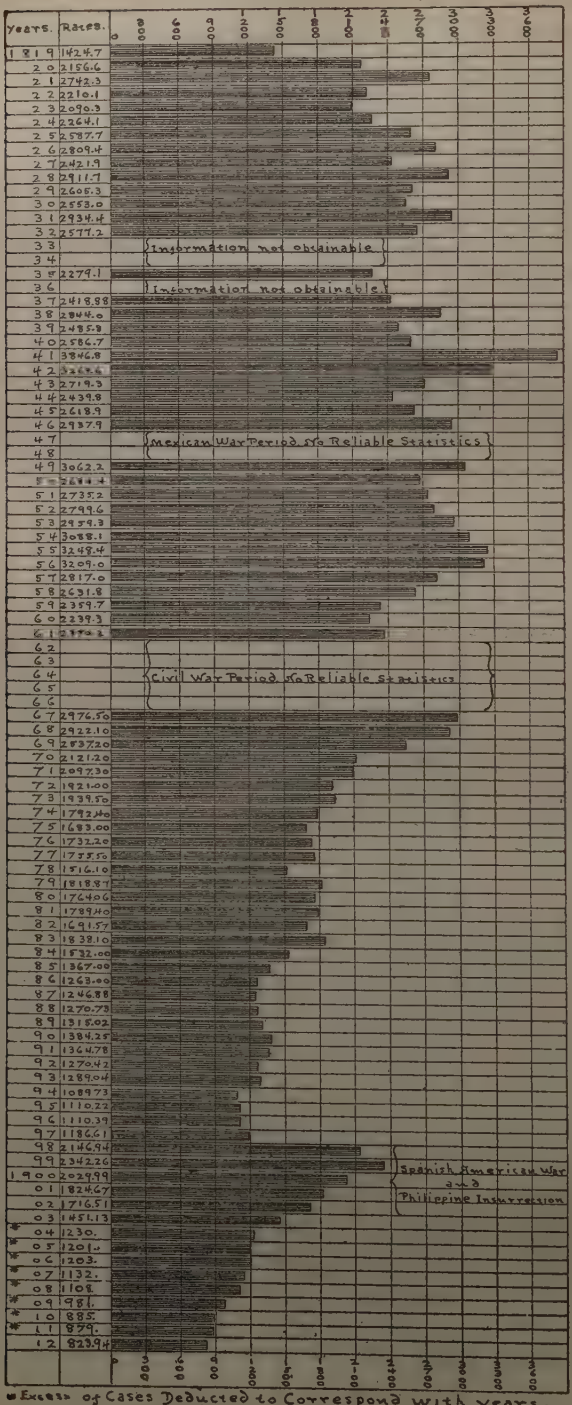


Chart C.

Admission Rates, All Causes, for the Army, years 1819-1912.



* Excess of Cases Deducted to Correspond with years Preceding 1904, and 1912.

The diseases causing the highest admission rate were as follows, in the order named: Venereal diseases, 136.70; diseases of the pharynx, 65.33; malarial fevers, 40; bronchitis, 34.89. The venereal rate in 1911 was for all troops 185.13, that for white being 187.08 and that for colored 139.91. In 1910 the total venereal rate was 174.95, that for white being 175.16, that for colored 170.13. In 1912 the rate for the white troops was 130.79, colored 249.42. This increase in the rate for the colored troops was due, as stated before, to the enormous increase in the prevalence of venereal diseases among the colored troops serving in the Philippine Islands, the case admission rate for these troops being 524.06 per 1,000, which is believed to be probably the highest admission rate for venereal diseases for either white or colored troops in the history of the Army. The reason for this alarming increase is not apparent.

The case admission rate for external causes was 149.64. The corresponding rate was 161 for 1911 and 178 for 1910. The following were the principal causes, with ratios per 1,000: Traumatism by fall, 48.23; injuries by animals, 14.67; traumatism by cutting or piercing instruments, 12.02; poisoning by food, 3.74; burns, 2.50; effects of heat, 2.21, and traumatism by firearms, 2.02. Eight men were shot by sentry, with 4 deaths. Two were wounded in action without a death.

DISCHARGES FOR DISABILITY.

Chart D gives the rates for discharges for disability for the Army from the year 1819 to 1912, inclusive.

Soldiers stationed outside the territorial limits of the United States are now brought to the United States for discharge, except those belonging to the Porto Rican regiment and the Philippine Scouts. They are, however, credited in the tabulated reports to the country in which the soldiers were serving when they became disabled if their commands were there at date of discharge.

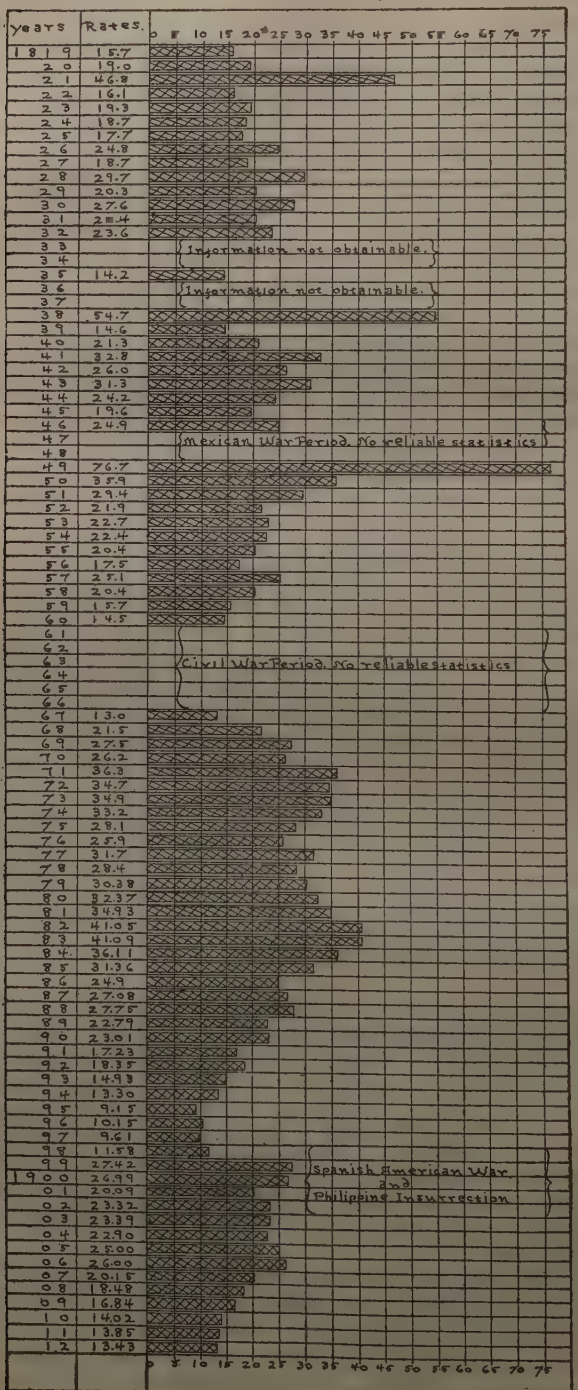
The present system requires that all soldiers certified by medical officers to be permanently incapacitated for the military service shall be examined and observed by a board of three medical officers at a recruit depot or general hospital before being discharged. The reports of these boards are sent to the War Department and discharges for disability are now made only by authority of the Secretary of War.

By reference to this chart it will be seen that the disability rate for 1912 was lower than for any year since the Spanish-American War, the lowest rates being for the years 1894–1898, inclusive, and for the year 1867. In 1912 there were in the Army 1,069 men discharged for disability, the rate being 13.43 per 1,000. The corresponding rate for the preceding year was 13.85. The rate for 1867 was 13 per 1,000, and the lowest rate from 1894–1898, inclusive, was that for 1895—the lowest on record for the Army—9.15 per 1,000. The highest rate in any year for discharge for disability was in 1849, when the total rate for discharges was 76.7 per 1,000.

The discharge rate for disease in 1912 was 12.18 per 1,000, as compared with 12.28 in 1911, and that for external causes was 1.24 in 1912, as compared with 1.56 in 1911. The diseases causing the highest discharge rate in 1912 were as follows: Mental alienation, 2.64; tuberculosis (all), 1.56; venereal diseases, 1.26; diseases of the urinary bladder, 0.38; and alcoholism, 0.33.

Chart D.

Discharge Rates, All Causes, for the Army, years, 1819-1912.



DEATHS FROM ALL CAUSES.

Chart E shows the total death rate for all causes for the Army from the year 1819 to 1912, inclusive. The total rate for 1912 was 4.79, as compared with the corresponding rate of 4.77 for 1911, and 4.46 for 1910. By reference to the chart, it will be seen that the rate for 1910 was the lowest on record in the Army. The highest death rate occurring in any year was in 1849, when the total rate for deaths was 80.2. This year, as stated above, also had the highest rate for discharges.

The death rate for diseases was 2.37 in 1912, which was the lowest on record in the Army, the next lowest being the rate in 1910, which was for the same causes, 2.44. The total number of deaths in 1912 was 381. The following diseases caused the highest number of deaths, absolute numbers being given: Tuberculosis (all), 25; organic diseases of the heart, 14; measles, 13; alcoholism, 12; and pneumonia, 12. The following were the principal causes of deaths from external causes: Suicides, 54; drowning, accidental, 43; traumatisms by crushings, 26; homicides, 20; deaths by fire arms, 15; and traumatisms by falls, 14.

INFLUENCE OF STATION ON TROOPS.

Regarding the comparative healthfulness of the various countries in which troops were serving during the year (Army transports being excluded) it will be noted in Table No. 3 that Alaska had, as usual, the lowest admission, discharge, and noneffective rates; Hawaii had the lowest death rate, the highest discharge rate, the second highest admission and noneffective rates; the Philippines had the highest admission and noneffective rates; China had the second lowest admission, discharge, and noneffective rates, and the second highest death rate; the Canal Zone had the highest death rate; and the United States had the second highest discharge rate and the second lowest death rate.

Chart E.

Death Rates, All Causes, for the Army, years, 1819-1912.

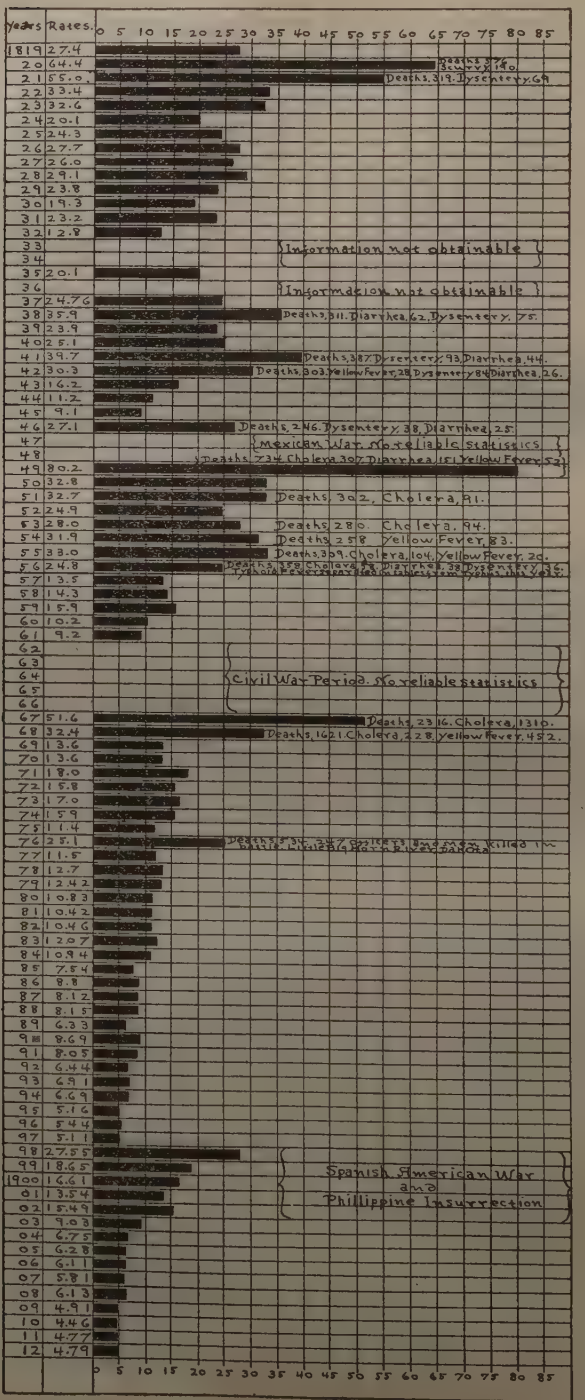

Years
Rates.
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85
Deaths 3,376 Scorbutus 140.
Deaths, 319 Dysentery, 69
Information not obtainable
Information not obtainable
Deaths, 311. Diarrhea, 62. Dysentery, 75.
Deaths, 387 Dysentery, 93 Diarrhea, 44.
Deaths, 303. Yellow Fever, 28 Dysentery 84 Diarrhea, 26.
Deaths, 246. Dysentery 38. Diarrhea, 25
Mexican War. No reliable statistics.
Deaths, 234 Cholera 307 Diarrhea 151 Yellow Fever, 52
Deaths, 302, Cholera, 91.
Deaths, 280 Cholera, 94.
Deaths, 258 Yellow Fever, 83.
Deaths, 309. Cholera, 104. Yellow Fever, 20.
Deaths, 358 Cholera, 58 Diarrhea, 38 Dysentery, 36.
Civil War Period. No reliable statistics
Deaths, 2316. Cholera, 1310.
Deaths, 1621. Cholera, 228. Yellow Fever, 452.
Spanish American War and Phillippine Insurrection

Chart F.

Death, Discharge and Noneffective Rates for Disease for the Army, American Troops, Enlisted Men, 1893–1912.

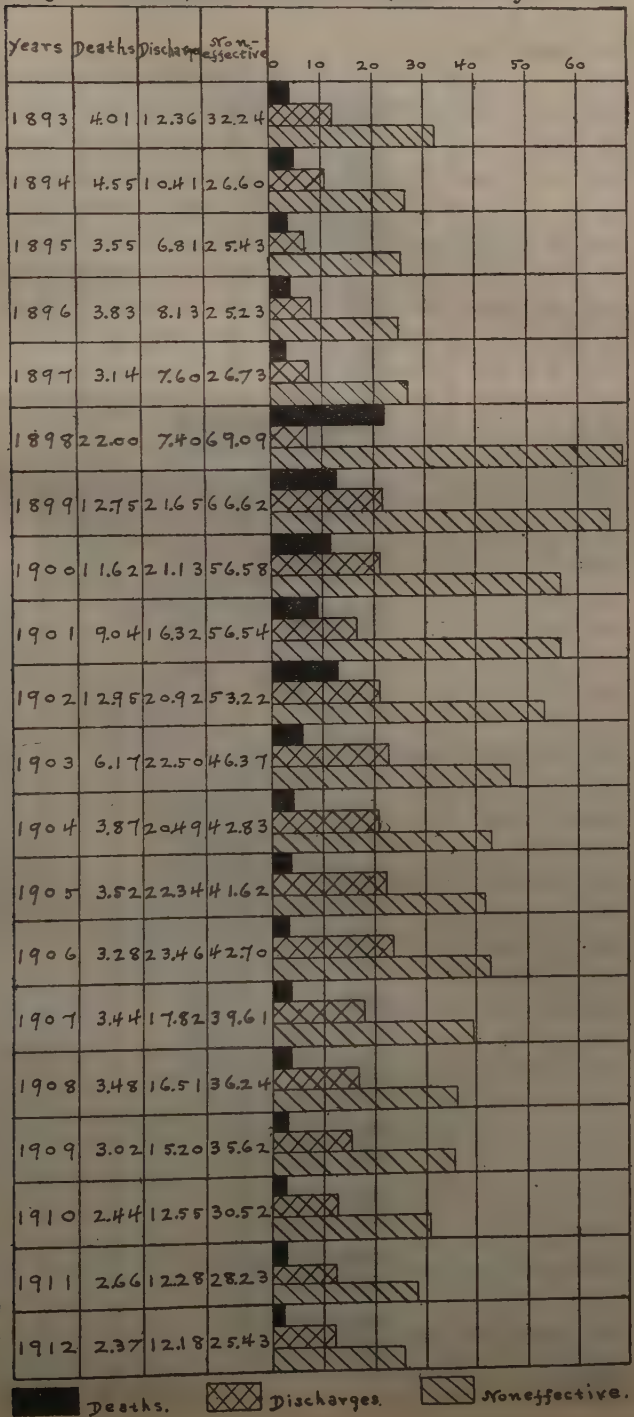


Chart G.

Total Losses, All Causes, for the Army, American Troops, Enlisted Men, 1893-1912.

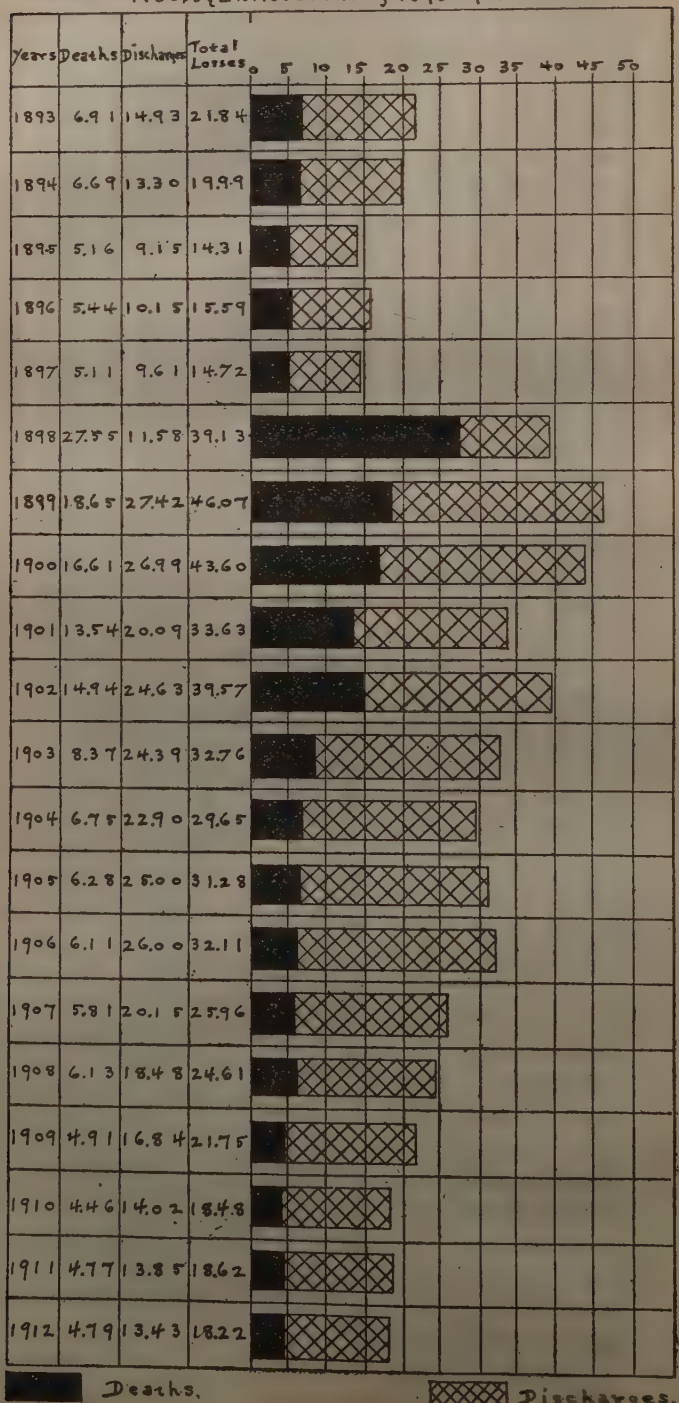
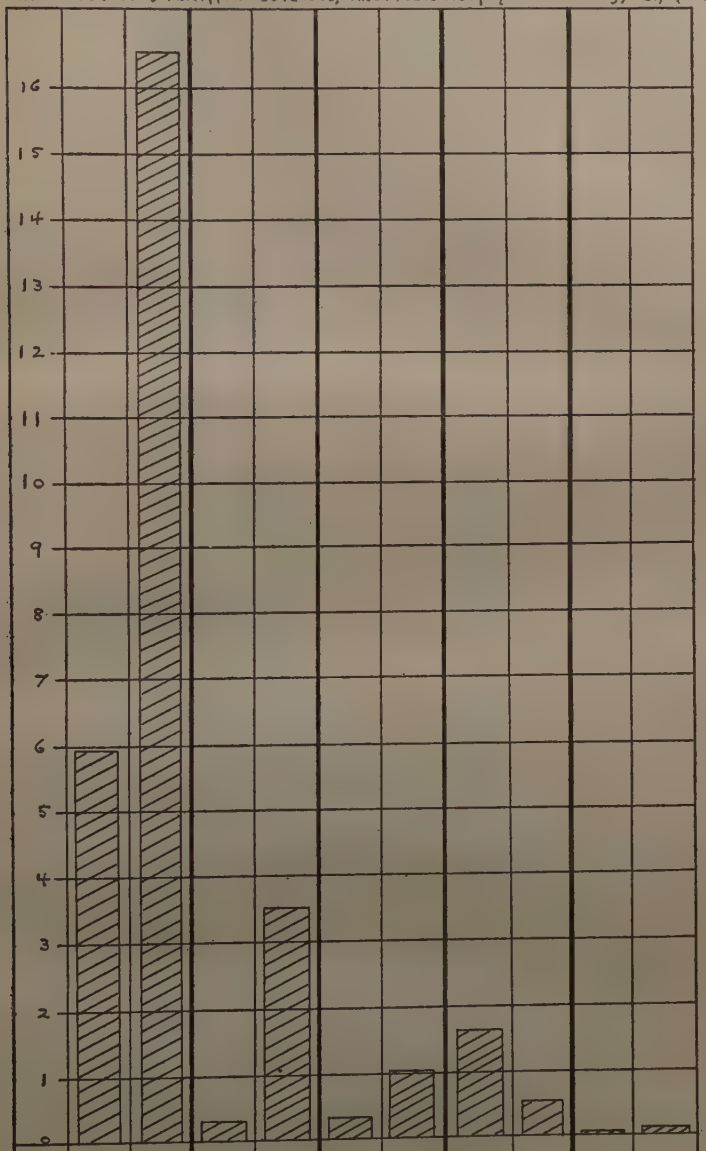


Chart I

Showing Comparative Rates for certain Special Diseases for the United States and Philippine Islands, American Troops, Enlisted Men, year 1912.



Rates	5.96	16.55	.30	3.51	.32	1.05	1.65	.53	.05	.09
	United States	Philippine Islands	United States	Philippine Islands	United States	Philippine Islands	United States	Philippine Islands	United States	Philippine Islands
	Venereal Diseases		Malarial Fevers.		Diarrhea and Enteritis.		Tuberculosis		Typhoid Fever.	

TABLE No. 3.—*Numerical view of the effect of disease and injury on United States troops, serving at home and abroad, in the year 1912, compared with corresponding data for the year 1911, by countries (enlisted men only).*

ABSOLUTE NUMBERS.

American troops (enlisted men).		Mean strength.	Admitted.			Discharged on certificate of disability.			Died.			Total losses.			Noneffective from sickness.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Days treated.	Constantly noneffective.
United States	1912	58,374	43,121	34,846	8,275	865	788	77	272	136	136	1,137	924	213	579,892	1,584.40
	1911	55,240	49,042	40,095	8,947	833	736	97	262	157	105	1,095	893	202	633,063	1,734.42
Alaska	1912	1,197	612	426	186	6	6	.....	7	4	3	13	10	3	7,114	19.44
	1911	1,119	468	316	152	5	3	2	7	6	1	12	9	3	5,369	14.47
Philippine Islands	1912	12,357	15,409	13,288	2,121	119	103	16	67	37	30	186	140	46	202,321	552.79
	1911	12,454	15,172	12,798	2,374	145	131	14	66	24	42	211	155	56	196,140	537.37
China	1912	1,097	765	654	111	6	6	.....	8	4	4	14	10	4	10,442	28.53
	1911	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hawaii	1912	3,376	3,161	2,298	863	61	55	6	13	3	10	74	58	16	41,323	112.90
	1911	2,014	2,176	1,629	547	28	27	1	6	2	4	34	29	5	32,726	89.66
Canal Zone	1912	773	616	496	120	12	12	.....	7	1	6	19	13	6	7,848	21.44
	1911	204	192	167	25	.....	.....	.....	1	.....	1	1	.....	1	1,909	5.23
Army transports	1912	1,093	803	767	36	.....	.....	.....	7	4	3	7	4	3	13,281	36.29
	1911	1,700	1,018	966	52	.....	.....	.....	6	5	1	6	5	1	14,414	39.49
Total	1912	**78,267**	**64,487**	**52,775**	**11,712**	**1,069**	**970**	**99**	**381**	**189**	**192**	**1,450**	**1,159**	**291**	**862,221**	**2,355.80**
	1911	72,748	68,073	55,975	12,098	1,011	897	114	348	194	154	1,359	1,091	268	883,646	2,420.95
Regular Army, American troops, 1902 to 1911		65,831	820,477	682,639	137,838	13,473	12,071	1,402	4,783	3,142	1,641	18,256	15,213	3,043	11,113,936	3,043.25
Porto Rico regiment	1912	588	672	610	62	4	4	.....	2	.....	2	6	4	2	6,042	16.51
	1911	580	609	562	47	5	4	1	4	2	2	9	6	3	6,304	17.27
Philippine Scouts	1912	5,407	3,667	3,337	330	45	38	7	24	17	7	69	55	14	40,210	109.86
	1911	5,266	3,922	3,510	412	26	23	3	24	17	7	50	40	10	38,172	104.58

American troops (enlisted men.)		Mean strength.	Admitted.			Discharged on certificate of disability.			Died.			Total losses.			Constantly non-effective.	Days treated.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.		Each soldier.	Each case.
United States	1912	58,374	738.70	596.94	141.76	14.48	13.19	1.29	4.55	2.28	2.28	19.03	15.47	3.57	27.15	9.93	13.45
	1911	55,240	887.80	725.83	161.97	15.00	13.26	1.75	4.72	2.83	1.89	19.72	16.09	3.64	31.40	11.46	12.91
Alaska	1912	1,197	511.28	355.89	155.39	5.01	5.01	.....	5.85	3.34	2.51	10.86	8.35	2.51	16.24	5.94	11.62
	1911	1,119	418.23	282.40	135.84	4.47	2.68	1.79	6.26	5.36	.89	10.73	8.04	2.68	13.15	4.79	11.47
Philippine Islands	1912	12,357	1,246.99	1,075.34	171.64	9.63	8.34	1.29	5.42	2.99	2.43	15.05	11.33	3.72	44.74	16.37	13.13
	1911	12,454	1,218.24	1,027.62	190.62	11.64	10.52	1.12	5.30	1.93	3.37	16.94	12.45	4.49	43.15	15.75	12.93
China	1912	1.097	697.36	596.18	101.19	5.47	5.47	.....	7.29	3.65	3.65	12.76	9.12	3.65	26.01	9.52	13.65
	1911	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hawaii	1912	3.376	936.32	680.69	255.63	18.07	16.29	1.78	3.85	.89	2.96	21.92	17.18	4.74	33.44	12.24	13.08
	1911	2.014	1,080.44	808.84	271.60	13.90	13.41	.50	2.98	.99	1.99	16.88	14.40	2.49	44.52	16.25	15.04
Canal Zone	1912	773	796.90	641.66	155.24	15.52	15.52	.....	9.06	1.29	7.76	24.58	16.81	7.76	27.74	10.15	12.74
	1911	204	941.18	818.63	122.55	.....	.....	.....	4.90	.....	4.90	4.90	.....	4.90	25.64	9.36	9.94
Army transports	1912	1.093	734.68	701.74	32.94	.....	.....	.....	6.40	3.66	2.74	6.40	3.66	2.74	33.20	12.15	16.54
	1911	1.700	598.83	568.24	30.59	.....	.....	.....	3.53	2.94	.59	3.53	2.94	.59	23.23	8.43	14.16
Total	**1912**	**78,267**	**823.4**	**674.29**	**149.64**	**18.43**	**12.18**	**1.24**	**4.79**	**2.37**	**2.41**	**18.21**	**14.55**	**3.65**	**30.99**	**11.02**	**13.37**
	1911	72,748	935.74	769.44	166.30	13.85	12.28	1.56	4.77	2.66	2.11	18.62	14.94	3.67	33.28	12.15	12.98
Regular Army, American troops, 1902 to 1911		65,831	1,246.33	1,036.95	209.38	20.16	18.06	2.10	7.16	4.70	2.46	27.32	22.76	4.56	46.23	16.88	13.55
Porto Rican regiment	1912	588	1,142.86	1,037.41	105.44	6.80	6.80	.....	3.40	.....	3.40	10.20	6.80	3.40	17.47	10.28	8.99
	1911	580	1,050.00	968.97	81.03	8.62	6.90	1.72	6.90	3.45	3.45	15.52	10.35	5.17	29.78	10.87	10.35
Philippine Scouts	1912	5,407	678.20	617.16	61.04	8.19	6.92	1.27	4.37	3.09	1.27	12.56	10.01	2.54	20.32	7.44	10.96
	1911	5,266	744.78	666.54	78.24	4.94	4.37	.57	4.56	3.23	1.33	9.50	7.60	1.90	19.86	7.25	9.73

INFLUENCE OF ARMS OF SERVICE.

In these comparisons the enlisted men of the Ordnance Department and Signal Corps are not considered on account of their small number and the special character of their service.

The admission rate was highest for the Field Artillery and lowest for the Hospital Corps; the death rate was highest in the Hospital Corps and lowest in the Field Artillery.

The following table shows the relative frequency of the occurrence of the more important diseases for the various arms of the service, the figure 1 indicating the highest ratio and 6 the lowest in each case for each arm:

TABLE No. 4.—*The relative frequency of occurrence of certain important diseases by arms of service, in the Army, among American troops, enlisted men, year 1912.*

Arms of service.	Most important diseases.											
	Venereal.	Tonsilitis and pharyngitis.	Diarrhea and enteritis.	Malaria.	Bronchitis.	Alcoholism.	Rheumatism, articular.	Dysentery.	Tuberculosis.	Typhoid fever.	Pneumonia (lobar).	Injuries.
Cavalry	2	4	2	3	6	5	4	1	5	2	4	1
Field Artillery	3	1	1	2	1	4	1	5	2	4	6	2
Coast Artillery	5	6	5	6	4	2	5	6	6	5	5	4
Infantry	1	3	3	4	2	3	2	2	4	3	1	3
Engineers	4	5	6	1	3	6	6	4	3	1	2	5
Hospital Corps	6	2	4	5	5	1	3	3	1	6	3	6

INFLUENCE OF RACE.

The tables show that the colored troops had the highest noneffective and death rates, the second highest admission and total loss rates, and the second highest average number of days for each case treated; the Porto Rican troops had the highest admission rate, the lowest death and noneffective rates and least number of days for each case treated. The white troops had the highest discharge and total loss rates, the highest average number of days for each case treated, and the second highest constant noneffective and death rates; and the Philippine troops had the lowest admission rate and the second lowest discharge rate. The constant noneffective rates were colored, 33.40; white, 29.93; Philippine, 20.32; Porto Rican, 17.47. The case admission rates were Porto Rican, 1,142.86; colored, 978.98; white, 815.80; Philippine, 678.20. The discharge rates were white, 13.76; Philippine, 8.19; colored, 6.92; Porto Rican, 6.80. The death rates were colored, 7.18; white, 4.66; Philippine, 4.37; Porto Rican, 3.40. The rates for total losses were white, 18.42; colored, 14.10; Philippine, 12.56; Porto Rican, 10.20. The average number of days lost for each case treated was white, 13.43; colored, 12.49; Philippine, 10.96; Porto Rican, 8.99.

The admission rate for venereal diseases was colored, 249.42; white, 130.79; Porto Rican, 105.44; Philippine, 55.67. Alcoholism, white, 17.80; colored, 9.23; Porto Rican, 1.70; Philippine, 0.37.

Malarial fevers, Philippine, 241.91; Porto Rican, 52.72; white, 41.11; colored, 18.97. Tuberculosis (all) Philippine, 5.92; colored, 5.38; Porto Rican, 3.40; white, 3.39. Dysentery, Porto Rican, 34.01; Philippine, 7.03; white, 4.33; colored, 3.85. Rheumatism, Porto Rican, 11.90; colored, 11.54; white, 8.98; Philippine, 4.81. Diarrhea and enteritis, Porto Rican, 112.24; colored, 44.09; white, 29.69; Philippine, 18.86. Mental alienation, white, 3.47; colored, 3.08; Porto Rican, 1.70; Philippine, 0.92. It will be seen from the above figures that as usual the white race had the highest rate for alcoholism with the Philippine Scouts having the highest rate for malarial fevers due, to a large extent, to their living outside the barracks and being unprotected by mosquito nets. The colored troops, due to the unusually high rate for venereal diseases for those of that color who were serving in the Philippines, occupy the unenviable position of having the highest venereal rate.

It will be noted that the Porto Rican troops had by far the highest rates for gastro-intestinal disorders as shown by the exceedingly high rates for dysenteries and diarrhea and enteritis. The Philippine troops had the highest rate for tuberculosis (all) and the white troops for mental alienation.

COMPARISON WITH FOREIGN ARMIES.

* * * * * * *

Table No. 77 shows that the admission rate for the United States for all causes was 738.70. This compares with the foreign armies as follows:

Higher:		Lower:	
French	1,982.00	Prussian	576.50
Dutch	1,280.00	Bavarian	444.10
Spanish	1,017.30	Russian	442.00
Japanese	856.30		
Austro-Hungarian	823.20		
British	802.77		
Portuguese	782.00		

It will thus be seen that the admission rate for the Army in the United States was lower than any except that for the Russian, Bavarian, and Prussian. The constant noneffective rate for the Army in the United States was 27.15 per 1,000. This compares with foreign armies as follows: French, 32.58; Spanish, 31.56; Japanese, 30.97; British, 27.16; Portuguese, 26.36; Dutch, 24.95; Prussian, 24.34; Bavarian, 21.94. The United States Army, therefore, had a lower noneffective rate than the other countries with which the comparison was made, except the Bavarian, Prussian, Dutch, and Portuguese.

The discharge rate for the United States was 14.48 as compared with:

Higher:		Higher—Continued.	
Bavarian	52.60	Russian	33.00
French	40.67	Japanese	26.94
Prussian	40.10	Lower:	
Spanish	33.50	British	9.78

These figures show very conclusively the fact that has been noted for a great many years that men are discharged much more freely in foreign armies than in the United States Army.

The death rate was 4.55 as compared with the Spanish, 4.67; Russian, 4.13; Japanese, 3.57; French, 3.01; Portuguese, 2.99; Austro-Hungarian, 2.84; British, 2.47; Dutch, 2.22; Bavarian, 1.74; Prussian, 1.73. Only one army had a higher death rate than the United States, that being the Spanish. As stated above, this is to be accounted for by the fact that the other armies discharge cases very much more freely than is done in the United States, and so send home to die cases which are in our Army cared for until the end in military hospitals.

The rate for the total losses, viz, discharges for sickness and deaths taken together, for the United States Army was 19.03 as compared with:

Higher:		Higher—Continued.	
Bavarian	54.34	Russian	37.13
French	43.68	Japanese	30.51
Prussian	41.83	Lower:	
Spanish	38.17	British	12.25

The British Army was the only one having a lower rate for total losses than the United States.

The rate for chancroids (ulcus molle) is much higher in the United States than for any other army except the Spanish. The rate for syphilis was higher in the United States than for any other with which a comparison is made, except the British, the rates being as follows: United States, 25.58; British, 29.30; Austro-Hungarian, 16.70; Russian, 15.01; Spanish, 11.91; Prussian, 5.30; Bavarian, 4.20.

For typhoid fever (typhus abdominalis) the rate for the United States was 0.26 as compared with Spanish 7.03, Japanese 5.47, Russian 5.20, French 2.38, British 1.7, Austro-Hungarian 1.30, Dutch 0.51, Prussian 0.19, Bavarian 0.13. It will thus be seen that the rate for this disease for the United States was lower than for any other army with which compared, except the Prussian and Bavarian. The death rate for typhoid fever was for the United States 0.03 as compared with Spanish 1.20, Russian 0.75, Japanese 0.55, French 0.31, Austro-Hungarian 0.20, Dutch 0.128, Prussian 0.06, Bavarian, 0.03.

For malarial fevers the rate for the United States was lower than that for the British, Russian, Japanese, and Spanish, and higher than that for the Austro-Hungarian, Dutch, French, Bavarian, and Prussian in the order mentioned. For dysentery the rate for the United States was higher than for any other of the armies compared except for the British, our rate being 1.78 and the British 3.20.

For pulmonary tuberculosis the rate for the United States Army was 2.88 as compared with Spanish 5.81, Dutch 4.82, French 4.73, Japanese 3.85, Russian 2.09, Prussian 1.40, Bavarian 1.40, Austro-Hungarian 1.40, British 1.30.

It will be noticed that in these tables the figures for the American troops are for the year 1912, for the British for the year 1911, and for the others included in the table for 1910, except that for the Japanese and Portuguese which are for 1909.

SURGICAL OPERATIONS.

In 4,855 operations there were 20 failures and 25 deaths. The anæsthetic used was ether in 1,809 cases, chloroform in 226, chloroform and ether 49, gas 36, local 2,233, and none was required

in 502 cases. Of major surgical operations, there were 357 operations for appendicitis, 241 for inguinal hernia, 17 for empyema, 25 for hepatic abscess, 46 for ischio-rectal abscess, and 303 for hemorrhoids. There were 7 deaths following operation for appendicitis, 2 each for intestinal obstruction and abscess of liver, gunshot wound (3), following amputation (3), and 1 each for operations on the following conditions: Goiter, ulcer of stomach, perforation of typhoid ulcer, tumor inoperable, subphrenic abscess, rupture of urinary bladder from fall, hypertrophy of prostate (senile), and cellulitis.

TABLE NO. 5.—*Influence of disease on enlisted American troops of the Army, by length of service, age, and arms of service, for the year 1912.*

LENGTH OF SERVICE.

	Mean strength.	Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.	Rate per 1,000 of mean strength. Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.
Under 1 year	17,414	19,693	461	40	719.00	1,130.87	26.02	2.26	41.28
1 to 2 years	14,366	11,089	162	17	421.15	771.89	11.10	1.17	29.32
2 to 3 years	8,633	4,122	48	9	139.05	477.47	5.46	1.02	16.11
3 to 4 years	7,304	3,567	74	7	145.64	488.36	9.95	.94	19.94
4 to 5 years	6,921	3,779	57	12	143.00	546.02	8.09	1.70	20.66
5 to 10 years	11,154	5,513	89	38	212.42	494.26	7.84	3.35	19.04
10 years and over	12,475	5,012	79	66	210.31	401.76	6.23	5.20	16.86
Total	78,267	52,775	970	189	1,990.57	674.29	12.18	2.37	25.43

AGE.

19 years and under	3,463	3,765	72	14	121.08	1,087.21	20.44	3.97	34.96
20 to 24 years	31,265	26,552	431	42	962.71	849.25	13.56	1.32	30.79
25 to 29 years	20,792	12,688	251	31	496.55	610.23	11.86	1.47	23.88
30 to 34 years	11,272	5,301	128	36	218.54	470.28	11.16	3.14	19.39
35 to 39 years	6,187	2,405	49	17	99.48	388.72	7.79	2.70	16.08
40 to 44 years	3,264	1,260	22	29	56.91	386.03	6.63	8.74	17.44
45 to 49 years	1,484	554	13	12	22.79	373.31	8.07	7.45	15.36
50 years and over	540	250	4	8	12.51	462.96	7.27	14.55	23.16
Total	78,267	52,775	970	189	1,990.57	674.29	12.18	2.37	25.43

ARMS OF SERVICE.

Infantry	27,860	19,294	292	76	763.83	692.54	10.34	2.69	27.42
Cavalry	13,122	8,921	118	23	349.63	679.85	8.85	1.72	26.64
Field Artillery	5,116	3,951	68	7	158.43	772.28	13.07	1.35	30.97
Coast Artillery	17,438	9,348	214	28	336.27	536.07	12.02	1.57	19.28
Ordnance	706	441	5	2	11.34	624.65	6.94	2.77	16.06
Engineers	1,747	1,139	20	4	50.37	651.97	11.27	2.25	28.83
Signal Corps	1,177	555	5	2	21.41	471.54	4.18	1.67	18.19
Hospital Corps	3,407	1,951	65	12	78.84	572.64	18.76	3.46	23.14
All others	7,694	7,175	183	35	220.45	932.54	23.27	4.45	28.65
Total	78,267	52,775	970	189	1,990.57	674.29	12.18	2.37	25.43

The preceding table shows that those having less than one year of service had as usual, the highest noneffective, admission, and discharge rates. These rates are also highest for these 19 years or under. The highest death rates were for those 50 years and over, and for those having 10 years or over of service. The highest noneffective and admission rates were in the Field Artillery, the highest death rate, and the highest discharge rate in the Hospital Corps.

UNITED STATES (CONTINENTAL) EXCLUSIVE OF ALASKA.

CONSTANTLY NONEFFECTIVE RATE.

The average mean strength of the troops serving in the United States was 58,374 (S. G. O.), of which 55,886 were white and 2,488 colored. The noneffective rate, the true measure of the effect of sickness on the military efficiency, for this year shows a decided improvement over last year. The rate was 27.15 per 1,000, as compared with 31.40 for 1911 and 33.95 for 1910. That for disease was 22.57, and for injury 4.58 in 1912, as compared with 26.41 and 4.99 for 1911. The number constantly sick from disease and external causes in 1912 was 1,584, and in 1911, 1,734. In other words, in 1912, there were 150 less men constantly sick than in 1911, although the average strength in 1912 was 3,134 more than it was in 1911. The noneffective rate for 1910, 1909, 1908, 1907, and 1906 was, respectively, 33.95, 39.70, 41.19, 45.22, and 46.92. The highest noneffective rate for disease was that for venereal disease, 5.96 per 1,000. In 1911 it was 8.82 and in 1910, 10.14. The second highest was tuberculosis (all kinds), 1.65. This rate was 1.63 in 1911, and 1.87 in 1910.

ADMISSION RATES.

As stated in the tabulations for 1912, cases only are counted, whereas in the years 1904 to 1911, inclusive, admissions were counted. As stated, in counting cases only all readmissions for obviously the same attack of the same disease are omitted from the tabulation.

The case admission rate for 1912 was 738.70 per 1,000. This is quite an improvement as compared with the corresponding rate, 837 for 1911, 840 for 1910, 945 for 1909, 1,079 for 1908, and 1,093 for 1907. The case admission rate for disease was, in 1912, 596.94. The corresponding rate was 680 per 1,000 in 1911 and 662 in 1910. The case admission rate for external causes was 141.76 per 1,000. This is also an improvement over the corresponding rate for external causes of 157 for 1911 and 178 for 1910. The highest case admission rate was for venereal diseases, 115.74 per 1,000, as compared with the corresponding rate of 145.29 for 1911. The second highest rate was for diseases of the pharynx, 74.45.

DISCHARGES FOR DISABILITY.

The disability discharge rate for the United States for 1912 was 14.48 per 1,000, as compared with 15.00 for 1911, 15.28 for 1910, 18.87 for 1909, and 21.35 for 1908. These figures show a very material reduction. The cause for this improvement during the last few years is believed to have been due to a large extent to General

Order 174, War Department, 1909, which requires that soldiers certified by medical officers to be permanently incapacitated for the military service shall be examined and observed by a board of three medical officers at a recruit depot or a general hospital before discharge.

The following table shows the result of the work of the boards at the recruiting depots:

TABLE No. 6.—*Results at recruit depots of examination by boards, of soldiers recommended for discharge.*

	Recruit depots.					
	Columbus Barracks, Ohio.	Jefferson Barracks, Mo.	Fort Logan, Colo.	Fort McDowell, Cal.	Fort Slocum, N. Y.	Total.
Number received	23	84	85	112	178	482
Number discharged for disability	20	64	66	101	135	386
Incurred "In line of duty"	3	19	26	39	24	111
Incurred "Not in line of duty"	17	45	40	62	111	275
Number in which line of duty was changed from "Yes" to "No"	1	10	3	.....	3	17
Number in which line of duty was changed from "No" to "Yes"	.....	2	1	2	2	7
Number returned to duty	1	13	9	2	8	33
Number otherwise disposed of	2	.....	5	6	12	25
Number remaining at end of year	.....	7	5	3	23	38

The principal causes of discharge with the percentage of the total number of discharges were mental alienation 21.07, tuberculosis (all) 12.69, venereal diseases 9.52, flat feet 8.76, and organic diseases of the heart 5.58.

TABLE No. 7.—*Discharges for disability, year 1912, United States, continental (excluding Alaska).*

Causes of discharge.	Number discharged.	Percentage of total discharges for diseases or external causes.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
General diseases	252	31.98	106	72	74	6	23
Tuberculosis (of the lungs, 94; of other organs, 6)	100	12.69	76	24	.....	.....	12
Venereal diseases	75	9.52	.....	18	57	.....	7
Syphilis (tertiary, 21; secondary, 14; undetermined, 2)	37	4.70	.....	14	23	.....	5
Gonorrhea and results (arthritis, 18; chronic gonorrhea, 9; diseases of the eyes, 1; epididymitis, 1; other results, 7)	36	4.57	.....	4	32	.....	2
Chancroidal buboes, chronic	2	.25	.....	.....	2	.....	.....
Alcoholism, chronic	22	2.79	.....	11	11	.....	1
Chronic rheumatism and gout (chronic articular, 13; arthritis deformans, 2; gout, 1)	16	2.03	7	8	1	.....	7
Measles	6	.76	6	.....	.....	6	.....
Dysentery (bacillary, 1; entamoebic, 5)	6	.76	6	.....	.....	.....	.....
Exophthalmic goiter	6	.76	1	5	.....	.....	1
Drug habit (cocaine, 4; morphine, 1)	5	.63	.....	.....	5	.....	.....
Diabetes mellitus	4	.51	3	1	.....	.....	1
Scoliosis	2	.25	.....	2	.....	.....	.....
Cancer	2	.25	2	.....	.....	.....	.....
Diabetes insipidus	2	.25	.....	2	.....	.....	.....
Acute articular rheumatism	1	.13	1	.....	.....	.....	.....

TABLE NO. 7.—*Discharges for disability, year 1912, United States, continental (excluding Alaska)*—Continued.

Causes of discharge.	Number discharged.	Percentage of total discharges for diseases or external causes.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty
General diseases—Continued.							
Deafness following mumps	1	0.13	1				
Purulent infection (pyemia)	1	.13	1				
Benign tumor (cerebral)	1	.13	1				
Leukæmia	1	.13	1				
Hemophilia	1	.13		1			1
Diseases of the nervous system and organs of special sense	277	35.15	86	176	12	5	34
Diseases of the nervous system	237	30.08	67	158	12		30
General paralysis of the insane and other forms of mental alienation	166	21.07	43	112	11		21
Dementia præcox	50	6.35	21	29			3
Defective mental development	44	5.58		44			11
Psychosis maniac depressive	15	1.90	8	7			
General paralysis of the insane	10	1.27	3		7		
Psychasthenia	2	.25		2			1
Psychosis traumatic	1	.13		1			
Other varieties	44	5.58	11	29	4		6
Epilepsy	25	3.17	9	16			3
Neuralgia and neuritis (hysteria, 13; neuritis, chronic, 2; sciatica, chronic, 1)	16	2.03	3	13			2
Other diseases of the system (neurasthenia, 8; others, 8)	16	2.03	3	13			3
Other diseases of the spinal cord (progressive muscular atrophy, 3; multiple cerebrospinal sclerosis, 2; spastic paralysis, 1)	6	.76	4	2			1
Locomotor ataxia	3	.38	2		1		
Paralysis, cause undetermined	2	.25	2				
Chorea	2	.25		2			
Cerebral apoplexy	1	.13		1			1
Diseases of the ears (all otitis media)	24	3.05	11	13		5	2
Diseases of the eyes (trachoma, 3; retinitis, chronic, 3; choroiditis, 2; others, 8)	16	2.03	7	9			2
Diseases of the bones and of the organs of locomotion	99	12.56	20	79		2	9
Diseases of the joints	88	11.17	14	74		2	7
Flat feet	69	8.76	2	67			5
Synovitis, chronic	5	.63	3	2		1	1
Arthritis, chronic	4	.51	4			1	
Hallux valgus	4	.51	1	3			1
Ankylosis	3	.38	3				
Hammer toe	2	.25		2			
Necrosis	1	.13	1				
Diseases of the bones (mastoiditis chronic, 2; osteomyelitis, 2; periostitis, 2)	6	.76	2	4			1
Other diseases (chronic muscular rheumatism, 2; chronic metatarsalgia, 1; others, 2)	5	.63	4	1			1
Diseases of the circulatory system	56	7.11	34	22		4	14
Organic diseases of the heart (chronic endocarditis, 25; valvular disease, 16; chronic myocarditis, 2; cardiac neurosis, 1)	44	5.58	27	17		3	11
Diseases of the veins (phlebitis, 3; hemorrhoids, 1; varicocele, 1)	5	.63	3	2			1
Others of the system (kachycardia, 2; functional disease, 1)	3	.38	1	2			1
Endocarditis acute (endocarditis acute, 1; myocarditis acute, 1)	2	.25	2			1	
Diseases of the arteries (arterial sclerosis)	1	.13	1				
Angina pectoris	1	.13		1			
Diseases of the genito urinary system	39	4.95	12	26	1		13
Diseases of the bladder (enuresis, 19; cystitis, 2)	21	2.66	1	19	1		9
Bright's disease (chronic parenchymatous nephritis, 9; chronic interstitial nephritis, 5)	14	1.78	9	5			3
Other diseases of the kidneys (chronic pyelitis, 2; pyonephrosis, 1)	3	.38	2	1			1
Other diseases of the system (chronic epididymitis)	1	.13		1			

TABLE NO. 7.—*Discharges for disability, year 1912, United States, continental (excluding Alaska)*—Continued.

Causes of discharge.	Number discharged.	Percentage of total discharges for diseases or external causes	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
Diseases of the digestive system	35	4.44	12	22	1	1	13
Hernia and intestinal obstructions (inguinal, 19; ventral, 1; omental, 1; obstruction, 1)	22	2.79	4	18	.....	1	11
Other diseases of the intestines (fistula in ano, 2; chronic ulcer of rectum, 1; faecal fistula, 1)	4	.51	3	1	.....	.....	1
Ulcer of the stomach	3	.38	2	1	.....	.....	.....
Diarrhea and enteritis (chronic colitis, 1; chronic gastro enteritis, 1)	2	.25	1	1	.....	.....	1
Others of digestive system (weak abdominal scar and peritoneal adhesion, 1; weakened abdominal muscles following operation, 1)	2	.25	2	.....	.....	.....	.....
Others of the stomach (chronic nervous dyspepsia)	1	.13	.....	1	.....	.....	.....
Diseases of the mouth (aphthous stomatitis)	1	.13	.....	.....	1	.....	.....
Diseases of the respiratory system	17	2.16	7	10	.....	2	3
Chronic bronchitis	7	.89	2	5	.....	.....	1
Diseases of the nasal fossa (chronic atrophic rhinitis)	2	.25	.....	2	.....	.....	1
Pneumonia	2	.25	2	.....	.....	2	.....
Asthma, bronchial	2	.25	.....	2	.....	.....	.....
Pleurisy (chronic fibrinous, 1; serofibrinous, 1)	2	.25	2	.....	.....	.....	.....
Diseases of the thyreoid body (cystic goiter)	1	.13	1	.....	.....	.....	.....
Others of the system (general physical weakness and debility probably due to pulmonary disease)	1	.13	.....	1	.....	.....	1
Diseases of the skin (corns, 3; chronic eczema, 3; trichophytosis, 1; bromidrosis, 1; psoriasis, 1; extensive scar, 1; and horny and deformed nails, 1)	11	1.40	2	9	.....	1	3
Congenital malformations (hyperphonia)	1	.13	.....	1	.....	.....	.....
Ill defined diseases (general physical weakness and debility)	1	.13	.....	1	.....	.....	1
Total for diseases	788	100.00	279	421	88	21	113
EXTERNAL CAUSES.							
Fractures	33	42.86	26	.....	7	.....	.....
Gunshot wounds	13	16.88	9	.....	4	.....	1
Results of injuries incurred prior to enlistment	10	12.99	.....	10	.....	.....	2
Incised wounds	7	9.09	5	.....	2	1	.....
Effects of crushing injuries	4	5.19	2	.....	2	.....	.....
Frostbite	2	2.60	1	.....	1	.....	.....
Dislocations	2	2.60	2	.....	.....	.....	.....
Lacerated wounds	2	2.60	2	.....	.....	.....	.....
Punctured wound	1	1.30	1	.....	.....	.....	.....
Sprain	1	1.30	1	.....	.....	.....	.....
Strain, muscular	1	1.30	1	.....	.....	.....	.....
Ruptured wound	1	1.30	1	.....	.....	.....	.....
Total	77	100.00	51	10	16	1	3
Total diseases	788	91.10	279	421	88	21	113
Total external causes	77	8.90	51	10	16	1	3
Grand total	865	100.00	330	431	104	22	116

DEATHS.

The death rate for disease for the United States was 2.28 per 1,000, as compared with 2.83 in 1911 and 2.30 in 1910. That for external causes was 2.28 in 1912, 1.89 in 1911, and 2.12 in 1910. The total for diseases and external causes was 4.55 in 1912, as compared with

4.72 in 1911, and 4.42 in 1910. The total number of deaths in 1912 was 272; of this number 136 were due to disease and 136 to external causes. Deaths, as well as discharges, which occurred in the United States among those who have been invalided home from their commands in foreign service, have been charged to the country where such commands are stationed. Tuberculosis caused 16 deaths in 1912, and 29 in 1911; measles, 12 in 1912, and 25 in 1911; organic heart disease, 12 in 1912, and 16 in 1911; pneumonia, lobar, 12 in 1912, and 18 in 1911, and nephritis 12 in 1912, and 6 in 1911. There were 47 suicidal deaths in 1912 and 36 in 1911; 16 homicidal in 1912, and 14 in 1911; and 73 accidental in 1912, and 55 in 1911. Of the accidental deaths, drowning caused the largest number, 24 in all. In 1911 there were 13 deaths due to this cause.

TABLE No. 8.—*Deaths among enlisted troops serving in the United States, continental (excluding Alaska), year 1912.*

Causes of death.	Number.	Ratio per 1,000 of—	
		Mean strength.	Deaths from disease or external causes.
DISEASES.			
Tuberculosis (pulmonary, 13; other organs, 3)	16	0.27	117.65
Measles	12	.20	88.24
Organic heart disease	12	.20	88.24
Pneumonia, lobar	12	.20	88.24
Nephritis (acute, 6; chronic, 6)	12	.20	88.24
Alcoholism (acute, 7; chronic, 2)	9	.15	66.18
Cancer	6	.10	44.12
Meningitis (simple, 2; cerebrospinal, 4)	6	.10	44.12
Broncho pneumonia	4	.07	29.41
Appendicitis	4	.07	29.41
Venereal diseases (syphilis, 2; gonorrhea, 1)	3	.05	22.06
Apoplexy, cerebral	3	.05	22.06
Aneurysm	3	.05	22.06
Rheumatic fever (acute, 1; subacute, 2)	3	.05	22.06
Typhoid fever	2	.03	14.71
Septicemia	2	.03	14.71
General paralysis of the insane	2	.03	14.71
Congestion of the lungs	2	.03	14.71
Peritonitis, general	2	.03	14.71
Dysentery, chronic amoebic	1	.02	7.35
Diabetes, mellitis	1	.02	7.35
Leukaemia	1	.02	7.35
Pernicious anemia	1	.02	7.35
Purpura hemorrhagica	1	.02	7.35
Morphinism	1	.02	7.35
Abscess of brain	1	.02	7.35
Otitis media	1	.02	7.35
Angina pectoris	1	02	7.35
Arterial sclerosis	1	.02	7.35
Cerebral embolism	1	.02	7.35
Goiter	1	.02	7.35
Chronic interstitial pneumonia	1	.02	7.35
Ulcer of stomach, perforation	1	.02	7.35
Ulcer duodenal, perforation	1	.02	7.35
Enteritis	1	.02	7.35
Cirrhosis of liver	1	.02	7.35
Biliary calculi and multiple liver abscesses	1	.02	7.35
Subphrenic abscess	1	.02	7.35
Gangrene from septic infection, slight wound of hand	1	.02	7.35
Unknown cause	1	.02	7.35
Total for disease	136	2.28	1,000.00

TABLE No. 8.—*Deaths among enlisted troops serving in the United States, continental (excluding Alaska), year 1912*—Continued.

Causes of death.	Number.	Ratio per 1,000 of— Mean strength.	Deaths from disease or external causes.
EXTERNAL CAUSES.			
Suicidal:			
By firearms (rifle, 11; revolvers, 12; shotgun, 1)	24	0.40	176.47
By poisoning (carbolic acid, 7; wood alcohol, 2; arsenic, 1; strychnine, 1; narcotic, 1; bichloride of mercury, 1)	13	.22	95.59
By asphyxiation (illuminating gas)	1	.02	7.35
By strangulation (by use of bed sheet around neck and radiator)	1	.02	7.35
By drowning	4	.07	29.41
By incised wounds (of neck, 3)	3	.05	22.06
By crushing (decapitation by railroad train)	1	.02	7.35
Total suicides	47	.79	345.59
Homicidal:			
By firearms: By civilians, revolver, 3; by comrades, rifle, 2; revolver, 1; by sentry or guard, while trying to escape, revolver, 1; rifle, 1; by non-commissioned officer for interference while in the discharge of his duties, revolver, 1; by police, revolver, 1; by unknown persons, 2	12	.20	88.24
By cutting and piercing instruments: Knife wound of neck in a drunken brawl while acting as peacemaker, 1; knife wound between ribs (while absent without leave) by another soldier, 1; pocketknife wounds penetrating brain, by another soldier, 1	3	.05	22.06
By other means: Kicked by another soldier in a drunken brawl rupturing brain, 1	1	.02	7.35
Total homicides	16	.27	117.65
Accidental:			
By acute poisoning (by wood alcohol, 6)	6	.10	44.12
By absorption of deleterious gases (ether anaesthesia first stage of, during operation for septic alveolar abscess, 1; asphyxiation, by illuminating gas, 1)	2	.03	14.71
By drowning (while bathing, 10; circumstances unknown, 7; fell from cliff, 1; from railroad bridge, 2; while boating, 1; while watering horse, 1; upsetting of boat, 1; falling overboard with grapling hook, rope around neck and shoulders, 1)	24	.40	176.47
By firearms: accidental (by shot gun, 1; fragment of breach of cannon, 1; rifle, 3; revolver, 2)	7	.12	51.47
By cutting or piercing instruments, accidental (stab wound, accidentally self inflicted by bayonet when drunk)	1	.02	7.35
By fall (concussion of brain by falling over parapet while absent without leave, 1; ruptured kidney with hemorrhage, blown off train while acting as guard, 1; fracture of surgical neck of humerus and shock, fall down stairs in company barracks, 1; fracture of leg by falling while drunk, 1; fracture of skull by falling from tower caused by contact with live wire, 1; fracture of cervical vertebrae, by fall from rings in gymnasium, 1; fracture of cervical vertebrae by fall from horse, 1; fracture of skull, by falling from horse, 2; punctured bladder by falling on sharp stick, 1)	10	.17	73.53
By machinery (fracture of skull due to being caught in revolving gear of 10-inch disappearing rifle, 1)	1	.02	7.35
By crushing (concussion of brain, struck by freight train, 1; fracture of skull, by falling from train, 1; from street car, 1; crushing by being run over by railroad trains, 8; crushing by being run over by loaded wagon, 1; crushing by being run over by automobile truck, 1; crushing by load of lumber falling on him while at work, 1; crushing by mass of earth caving in on him while at work, 1; crushing by fall in aeroplane, 1; crushing by being struck by trolley car while riding runaway horse, 1; crushing by fall of horse, 1; cause not stated, fracture of skull, 1)	19	.32	139.70
Effects of heat (sunstroke incurred by training for running race in hot sun)	1	.02	7.35
Lightning, lightning strokes	2	.03	14.71
Total accidental	73	1.22	536.76
Total external causes	136	2.28	500.00
Deaths from disease	136	2.28	500.00
Deaths from external causes	136	2.28	500.00
Grand total	272	4.55	1,000.00

PREVALENCE OF SPECIAL DISEASES.

TYPHOID FEVER.

Eighteen cases of typhoid fever (officers and enlisted men) occurred during the year in the Army stationed within the geographical limits of the United States with 3 deaths, as compared with 44 cases with 6 deaths in 1911; 142 with 10 deaths in 1910; and 173 with 16 deaths in 1909. Fifteen of the cases with 2 deaths occurred among enlisted men, and 3 cases with 1 death among officers. The following table shows the distribution at the different posts, with the days lost and the number constantly sick:

TABLE NO. 9.—*Typhoid fever at military stations, United States (continental), officers and enlisted men, year 1912.*

	Cases.	Days treated.	Constantly sick.	Died.
Jefferson Barracks, Mo	3	312	0.85	
Columbus Barracks, Ohio	2	88	.24	1
Washington, D. C., attending surgeon's office	[1]2	129	.35	[1]1
Washington Barracks, D. C	[1]1	73	.20	
Fort Oglethorpe, Ga	2	85	.23	
Fort Slocum, N. Y	1	117	.32	
Fort Williams, Me	1	56	.15	
Fort Leavenworth, Kans	1	55	.15	
Fort Wayne, Mich	1	27	.07	
Fort McDowell, Cal	1	[2]5	.01	
Field, central division, Las Cienegas, N. Mex	[3]1	13	.04	1
Field, western division, Camps, Cal	[4]1	55	.15	
Field, western division, Douglas, Ariz	[5]1	87	.24	
Fort Porter, N. Y., remaining from last year		26	.07	
Fort Sam Houston, Tex., remaining from last year		18	.05	
Army and Navy General Hospital, Hot Springs, Ark., remaining from last year		13	.04	
Fort Logan, Colo., remaining from last year		1	.003	
Total	18	1,160	3.17	3

[1] Treated at the Walter Reed General Hospital.
[2] Term expired and soldier discharged at his own request before recovery.
[3] Treated at Fort Bliss, Tex.
[4] Treated at Fort Rosecrans, Cal.
[5] Treated at Fort Huachuca, Ariz.

The admission and death rates for this disease (officers and enlisted men) were 0.29 and 0.0475, respectively, as compared with 0.76 and 0.10 for 1911. The case mortality was 16.6 per cent, which is apparently quite high. It must be obvious, however, that when the number of cases of any of the serious infectious diseases is so small the case mortality rate is liable to fluctuate greatly and has little importance.

* * * * * * *

Advances in the other sanitary measures have gone on, hand in hand, with the extension of the typhoid prophylaxis. It is believed that the typhoid prophylaxis is as potent a preventive against typhoid as vaccination is against smallpox. Vaccination is certainly a reliable measure for the prevention of smallpox, and yet few would advocate the abolition of other needful sanitary measures. From chart R it is also apparent that typhoid fever in the Army is not being incorrectly diagnosed and placed under the head of other fevers.

It has now been clearly demonstrated that the immunization against typhoid fever by the use of typhoid prophylactic is a thoroughly practical measure for the prevention of this disease; that it is unattended by bad results, and that its protective value is very probably equal to that afforded against smallpox by vaccination.

It was stated in the 1912 report that since the beginning of the year 1912 each case as it is reported has been carefully investigated. Surgeons are required to furnish a complete history of every case, giving in detail the methods used in arriving at the diagnosis. This office insists that in each case, if possible, the diagnosis be confirmed by a blood culture or by a culture from the feces or urine. Since the Widal reaction occurs in practically all persons who have received the prophylactic and persists in the blood for some time thereafter, it can not be considered as positive evidence of the presence of typhoid fever in an immunized person. It is recognized that it is not possible in every case of typhoid fever to confirm the diagnosis by cultures and it is not the practice of this office to refuse to accept such a diagnosis when the clinical findings are clear. It is believed, however, that in practically all the cases of typhoid fever it should be possible to isolate the organisms either from the blood or from the urine or feces at some time during the course of the disease. Every case reported is carefully followed up. In two instances in 1912 the surgeons were advised to report cases as typhoid when the laboratory reports were negative, and when they were inclined to report the disease under another head. In only one instance was it necessary to advise the surgeon to change a diagnosis from typhoid to something else. In this case all the evidence was against the case being typhoid.

The results of this campaign bid fair to be even more brilliant in 1913 than in 1912. During the first six months of 1913, so far as can be determined from the information on hand at this date (August 1), not a single case has occurred in the Army stationed in the United States, Hawaii, Porto Rico, Panama, Alaska, or Philippine Islands. The last admission for this disease in an enlisted man was October 27, 1912. During the same period in 1912 in the United States there were 8 cases with 1 death, and in 1911, 24 cases with 5 deaths.

Reimmunizations with the typhoid prophylactic are now carried out upon reenlistment in the same way as revaccination against smallpox. The duration of the immunity is not yet known, but it is improbable that it is longer than that conferred by vaccinia against smallpox, and therefore reimmunization at the beginning of each enlistment period is believed to be necessary.

It is again recommended that when it may become necessary to mobilize either the militia or volunteer troops in the field that this measure be made compulsory for them. As was stated in the last report of this office, in case this is done it is believed that it will be impossible in future for large epidemics of typhoid fever to occur in the United States Army. An occasional case will develop, but typhoid fever will cease to be a scourge to the Army in the future as it was in the past, and will disappear even as smallpox has practically disappeared in armies as the result of vaccination. Among the sanitary achievements of the Medical Department in preventive medicine since the time of the Spanish-American War this sanitary measure for the prevention of typhoid fever should rank second in importance only to the discovery of the method of transmission of yellow fever.

VENEREAL DISEASES.

Four years ago, compelled by the fact that the venereal diseases were the only infectious diseases which showed no tendency to diminish and had become the greatest source of disability, this office began to urge the application to them of the principles of preventive medicine. The campaign was first taken up through the chief surgeons and post surgeons, suggesting that they enlist the interest and cooperation of commanding officers, and also suggesting the lines along which their activities should be directed, which were in general terms: (1) The encouragement of wholesome recreations at military posts which would keep soldiers from seeking amusement at vile resorts; (2) the instruction of the men by lectures and personal advice whenever opportunity offered as to the nature of venereal diseases, the extent of their prevalence among prostitutes, and the grave dangers caused by them, not only to the men infected but to their families; (3) the importance of early detection of cases of venereal diseases by periodical physical examinations of the men, and the importance of keeping cases under continuous observation and treatment until cured; (4) finally, approved measures of personal prophylaxis were suggested for those who would, contrary to advice, expose themselves to venereal infection. The widest latitude was given the medical officers as to the method of prophylaxis which should be employed, the importance of personal cleanliness was emphasized, and such medicinal preparations as were desired for personal disinfection after exposure were freely furnished.

For the last three years a report has been asked for through The Adjutant General from each post commander and post surgeon as to the success of the measures suggested, with a request for suggestions as to their improvement. The number of officers interested in this propaganda has steadily increased and through these reports the most practicable and efficient methods have been gradually evolved until last year for the first time the War Department was brought to see the necessity for official action, which was taken by General Order No. 17, dated May 31, 1912, published in full in the Annual Report of the Surgeon General for 1912. By this order the hospital method of personal prophylaxis for soldiers who had exposed themselves to venereal infection was formally adopted as the only one which was susceptible of enforcement by military authority.

The preventive measures to be taken under this order were described in detail in a circular of this office, which was, however, not published but furnished confidentially to medical officers through post commanders by the War Department. It is regretted that this circular was made confidential, because the efforts of the military authorities to check the venereal plague have not only caused no adverse criticism but have been followed by much sympathetic interest by sanitary officials and other persons interested in this aspect of municipal hygiene as well as those interested in the health and well-being of the Army, and this office has received many letters of inquiry as to the details of methods pursued and their success, which information it was somewhat difficult to give in detail on account of the confidential character given to it.

The stamp of official approval given by General Orders 17 to the campaign against venereal diseases was rendered more effective by action taken by Congress in the Army appropriation bill and pub-

lished to the Army by General Orders 31, to stop the pay of officers and enlisted men in active service who should be absent from duty on account of disease resulting from their intemperate use of drugs or alcoholic liquors or other misconduct. The phrase "other misconduct" is understood and construed to refer to the contraction of venereal diseases. It was held by this office that this legislation constituted a modification of the enlistment contract and therefore was applicable to all enlisted men in active service, but the Judge Advocate General took the view, in which he was sustained by the comptroller, that the legislation was penal in character and therefore did not affect individuals whose misconduct, resulting in the contraction of venereal disease, had occurred prior to the date of approval of the act, August 24, 1912, or to those who contracted these diseases prior to enlistment. Although this construction has complicated the operation of the law by creating a privileged class of venereal patients to which the law does not apply, the number of such individuals will steadily diminish with the lapse of time, and it is almost the unanimous opinion of the Army that this legislation has been productive of great good. It is gratifying, therefore, to be able to report for the first time in a number of years a marked improvement in the venereal rates. This improvement is shown in all three of the venereal diseases and throughout the Army, although it has been more marked in the United States than in the Philippine Islands.

The following tables give the occurrence of venereal diseases in the Army by comparative rates for the past five years for each of these diseases in the United States. In these tables, as in the statistical tables in the back of this report, readmissions for the same venereal infection have not been counted for the year 1912, so that hereafter admissions will be synonymous with cases. Days lost on readmissions, however, have been counted in all cases in calculating days lost and the constantly sick rate.

TABLE No. 12.—*Venereal diseases, entire Army and United States proper, enlisted men, compared for years 1910, 1911, and 1912.*

	Entire Army (enlisted men).			United States proper (enlisted men).		
	1912	1911	1910	1912	1911	1910
Original admissions (cases) per 1,000 of mean strength.	136.70	163.49	154.91	115.74	145.29	137.98
Constantly noneffective rate	7.78	10.14	11.51	5.96	8.82	10.14

TABLE No. 13.—*Venereal diseases—Admissions and discharges, Army, American troops (enlisted men), year 1912.*

	Mean strength.	Syphilis.				Chancroids.			
		Admissions.		Discharges.		Admissions.		Discharges.	
		Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
United States	58,374	1,493	25.58	37	0.62	1,173	20.09	2	0.03
Alaska	1,197	9	7.52	1	.83	4	3.34	.....	.....
Hawaii	3,376	138	40.88	4	1.18	89	26.36	.....	.....
Philippines	12,357	528	42.73	5	.40	832	67.32	.....	.....
China	1,097	32	29.17	.....	.....	109	99.36	.....	.....
Panama Canal Zone	773	10	12.94	1	1.29	25	32.34	.....	.....
Army transports	1,093	14	12.81	.....	.....	35	32.02	.....	.....
Total	78,267	2,224	28.42	48	.60	2,237	28.96	2	.03

TABLE NO. 13.—*Venereal diseases—Admissions and discharges, Army, American troops (enlisted men), year 1912*—Continued.

	Gonorrhea.				Total.			
	Admissions.		Discharges.		Admissions.		Discharges.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
United States	4,090	70.07	36	0.60	6,756	115.74	75	1.26
Alaska	37	30.91	.....	.....	50	41.77	1	.83
Hawaii	188	55.69	5	1.48	415	122.93	9	2.67
Philippines	1,719	139.11	9	.73	3,099	249.17	14	1.13
China	82	74.75	.....	.....	223	203.28	.....	.....
Panama Canal Zone	18	23.29	.....	.....	53	68.56	1	1.29
Army transports	74	67.70	.....	.....	123	112.53	.....	.....
Total	6,208	79.32	50	.63	10,699	136.70	100	1.26

	Total days.	Constantly sick.	Ratio per 1,000.
Syphilis	56,420	154.15	1.97
Chancroids	47,045	128.54	1.64
Gonorrhea	119,573	326.70	4.17
Total	223,038	609.39	7.79

TABLE NO. 14.—*Venereal diseases, by years, 1908 to 1912, United States continental (excluding Alaska), enlisted men.*

[Ratio per 1,000 of mean strength.]

	Number of cases (after deducting recurrent admissions).	Admitted.			Discharged on certificate of disability.			Died.			Noneffective.		
		Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.
Gonorrhea and results:													
1912[1]	70.07	70.07	69.87	74.36	0.60	0.61	0.40	0.02	0.02	....	3.26	3.27	2.94
1911	85.37	94.52	94.48	95.12	.79	.84	....	....	....	....	4.68	4.72	3.93
1910	91.22	102.44	102.17	107.17	.77	.78	.67	....	....	....	5.90	5.98	4.41
1909	105.86	125.27	124.49	147.37	1.36	1.34	2.08	....	....	....	7.22	7.23	7.02
1908	108.68	123.50	123.05	151.93	1.06	1.08	....	....	....	....	6.71	6.72	6.18
Chancroid:													
1912[1]	20.09	20.09	20.52	10.45	.03	.03	....	....	....	....	1.01	1.03	.50
1911	23.55	25.04	25.22	21.82	.....	.....	.....	.....	.....	.....	1.32	1.34	1.05
1910	24.23	26.42	25.83	36.84	.....	.....	.....	.....	.....	.....	1.53	1.51	1.86
1909	23.49	25.33	25.09	32.13	.....	.....	.....	.....	.....	.....	1.54	1.52	2.03
1908	26.49	28.20	27.64	63.54	.04	.02	1.32	....	....	....	1.75	1.71	4.38
Syphilis:													
1912[1]	25.58	25.58	25.84	19.69	.62	.61	.80	.03	.03	....	1.70	1.68	2.11
1911	36.37	44.30	45.33	25.91	.52	.48	1.36	.11	.11	....	2.82	2.85	2.30
1910	22.54	26.65	26.68	26.12	1.13	1.16	.67	.04	.04	....	2.71	2.75	2.07
1909	22.01	26.85	26.47	37.74	1.92	1.81	5.19	....	....	....	2.68	2.64	3.74
1908	19.99	23.15	22.46	66.30	1.62	1.64	....	.04	.04	....	2.17	2.14	3.46
Total venereal:													
1912[1]	115.74	115.74	116.24	104.50	1.26	1.26	1.21	.05	.05	....	5.96	5.98	5.55
1911	145.29	163.85	165.03	142.85	1.31	1.31	1.36	.11	.11	....	8.82	8.91	7.29
1910	137.98	155.51	154.69	170.13	1.90	1.94	1.34	.04	.04	....	10.14	10.25	8.34
1909	151.35	177.46	176.04	217.24	3.28	3.14	7.27	....	....	....	11.44	11.39	12.79
1908	155.17	174.84	173.14	281.77	2.73	2.75	1.38	.04	.04	....	10.63	10.57	14.02

[1] Recurrent admissions were not tabulated in year 1912.

It will be seen from these tables that the rate for venereal diseases (cases) for the United States, continental, was 115.74 per 1,000 for 1912, as compared with 145.29 for 1911. There were 516 cases of

syphilis less than last year. In gonorrhea the number of cases is 626 less than last year, and in the local infection, chancroids, the diminution is 128. It was explained in the last report that the large increase in the number of cases of syphilis reported was ascribed to the improvements in diagnostic methods caused by the general use of the Wassermann test during 1912. In 1912 there was a large falling off in the number of secondary and tertiary cases of syphilis with a slight increase in the case rate for the primary cases. In comparing the figures for 1911 and 1912, and especially 1912, with the preceding years, it must be borne in mind that the diagnosis prior to 1911 was made without the advantage of the Wassermann reaction. These figures, therefore, include latent cases which are now detected by it, and which were largely missed prior to 1911. The slight increase in the rate for primary syphilis for 1912 was no doubt caused by the increased accuracy of diagnosis, due to the demonstration of the spirochaeta pallida in the early stages. Additional value is given to the venereal rates for 1912 by the fact that now under the operations of General Order 17, bimonthly physical examinations of troops are held throughout the Army and concealed cases which were in former years probably quite numerous are now reduced to a minimum. The fact that the total venereal rates in spite of these factors tending to swell them show a decided reduction over previous years must be regarded as an important achievement of preventive medicine.

TABLE NO. 15.—*Syphilis, United States (continental), excluding Alaska, years 1908–1912, enlisted men.*

[Ratio per 1,000 of mean strength.]

Year.	Primary syphilis.			Secondary syphilis.			Tertiary syphilis.			Hereditary syphilis.			Total.		
	Case rates.	Admission rates.	Noneffective rates.	Case rates.	Admission rates.	Noneffective rates.	Case rates.	Admission rates.	Noneffective rates.	Case rates.	Admission rates.	Noneffective rates.	Case rates.	Admission rates.	Noneffective rates.
1912[1]	3.89	3.89	0.18	19.01	19.01	1.20	2.50	2.50	0.31	0.17	0.17	0.01	25.58	25.58	1.70
1911	3.75	4.09	.26	28.66	35.54	2.14	3.64	4.29	.43	.33	.38	.02	36.37	44.30	2.85
1910	3.34	3.24	.23	17.26	19.96	2.00	1.83	2.01	.36	.11	.12	.01	22.54	25.33	2.60
1909	3.15	3.20	.24	17.09	21.67	2.17	1.75	1.96	.27	.02	.02	.0001	22.01	26.85	2.68
1908	2.46	2.57	.14	15.48	18.31	1.71	2.05	2.27	.31	.....	.....	.....	19.99	23.15	2.17

[1] Recurrent admissions not tabulated in year 1912.

In studying the total venereal rate in the United States, continental, for 1912, by quarters, it is seen that the improvement has been progressive. Thus for the first quarter of the calendar year, before the issue of General Order 17, the admission rate was only slightly lower than that of the preceding year, being 130 per 1,000; for the second quarter it was 113; for the third quarter 107, and for the fourth quarter 91 per 1,000. This improvement has been continued into the year 1913.

The noneffective rate for the United States for 1912 is 5.96, as compared with 8.82 for 1911, 10.14 for 1910, and 11.44 for 1909. This rate is the true measure of noneffectiveness produced, and shows in a still more definite and satisfactory way the gain which has been accomplished.

By reference to Table No. 12 it will be seen that the rate for the total Army also showed a very material improvement. The admission rate in 1912 was 136.70, and in 1911, 163.49, while the noneffective rate was 7.78 in 1912 and 10.14 per 1,000 in 1911. As noted elsewhere, the rates in the Philippine Islands did not show as much improvement as the corresponding ones in the United States. The admission rate in the Philippine Islands in 1912 was 249.17 per 1,000, and in 1911, 305.12, while the noneffective rate was 16.55 in 1912 and 16.63 in 1911.

There were no colored troops in the Philippine Islands in 1910 and 1911; therefore the rates for these years are for white troops. The rate for white troops in 1912 was 215.43 per 1,000 for admissions, and 15.92 for noneffectiveness, while that for the colored troops was 524.06 per 1,000 for admissions with a noneffective rate of 21.70. It is thus apparent that the rates for the white troops showed a very satisfactory improvement, but that the rates for the colored troops were exceedingly high.

As above mentioned, The Adjutant General was asked in January to call for a report from the commanding officer of each post and military command as to the results obtained by General Order 17, 1912, with such remarks as to its operation and such suggestions as to improvement as might seem desirable. A study of these reports from 95 posts (some of the smaller posts and arsenals having been omitted) shows that at 69 posts the surgeon thought that the measures taken had been effective in reducing venereal diseases. In 14 the results were stated to be fair or slight, and in 12 they were stated as not effective. Five of these latter were Coast Artillery posts, at which it was stated that the distance and location of the garrison from the neighboring town was such that it was impossible for men after venereal exposures in town to present themselves for prophylactic treatment within a reasonable length of time and that consequently the treatment was not effective. At the other posts at which the answer was negative it was explained by the statement that the men did not report, or in some cases what was probably a different and more accurate way of stating the same fact, that the officers were indifferent. A study of these reports and the great contrast in the results obtained at posts where commanding officers and surgeons are enthusiastic and optimistic makes it certain that the failure of the men to comply with the provisions of General Order 17 is in direct proportion to the indifference and pessimism of post and organization commanders and post surgeons. The great change that has taken place in the venereal statistics of the recruit depots, excepting Fort Logan, Colo., shown in Table No. 16, is a conclusive evidence of what can be accomplished by an enthusiastic determination to enforce orders and obtain results.

TABLE No. 16.—*Recruit depots—Total number of admissions, venereal diseases, with ratios and mean strength, officers and enlisted men, years 1910, 1911, and 1912.*

Recruit depots.	Year 1910.			Year 1911.			Year 1912.		
	Admissions.		Mean strength.	Admissions.		Mean strength.	Admissions.		Mean strength.
	Total.	Ratio.		Total.	Ratio.		Total.	Ratio.	
Fort Slocum, N. Y	177	178.79	990	425	338.92	1,254	196	151.12	1,297
Jefferson Barracks, Mo	319	318.36	1,002	324	263.63	1,229	165	134.80	1,224
Columbus Barracks, Ohio	338	317.07	1,066	312	240.93	1,295	167	139.75	1,195
Fort McDowell, Cal	163	270.76	602	207	253.06	818	78	115.21	677
Fort Logan, Colo	63	121.39	519	162	274.58	590	149	230.65	646

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RATES FOR 1913.

The figures compiled in this office for all posts in the United States for the first six months of 1913 show that the marked improvement begun in 1912 has continued in 1913. The annual rate for the United States for the first six months of 1913 was 74.67 per 1,000 for all venereal diseases, that for syphilis being 19.84, for gonorrhea 43.00, and for chancroids 11.82. By reference to Chart T it will be observed that this is the lowest rate for venereal disease since 1895. This rate includes all cases occurring, not only all those excused from duty but those taken up for record only, as well as all concurrent cases. The following table shows the number of cases of each disease, with rates:

Venereal diseases—January to June, 1913, United States, continental (exclusive of Alaska).

	Cases on sick report.		Concurrent cases.		Cases for record only (no time lost).		Total.	
	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.
Syphilis	527	16.98	.....	.....	89	2.87	616	19.84
Chanchroid	249	8.02	15	0.48	103	3.32	367	11.82
Gonorrhea	950	30.60	15	.48	370	11.92	1,335	43.00
Total	1,726	55.60	30	.97	562	18.10	2,318	74.67

MALARIAL FEVERS.

The occurrence of malarial fever in the United States continues to decrease. The admission rate for 1912 was 14.22, as compared with 14.68 for 1911, 16.36 for 1910, 23.06 for 1909, and 26.69 for 1908, which in its turn was the lowest on record in this office. This continuous improvement is to be credited not alone to the efforts of medical officers, supported by commanding officers, but also to the liberal provision of wire-gauze screens for doors and windows by the Quartermaster's Corps. The noneffective rate was 0.30 per 1,000, as compared with 0.35 in 1911, 0.36 in 1910, 0.51 in 1909, and 0.58 in 1908.

Table No. 19 shows the relative incidence of the various forms of malarial infection for the past five years. Not a single death has occurred in the Army in the United States from malarial fever since 1906.

TABLE No. 19.—*Malarial infections—United States, continental (excluding Alaska), years 1908 to 1912, inclusive, enlisted men.*

[Ratio per 1,000 of mean strength.]

Malarial fevers.	Admitted.			Discharged on certificate of disability.			Died.			Noneffective.		
	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.
Quartan and tertian:												
1912	12.42	12.89	2.01	.....	.....	.....	.....	.....	.....	0.24	0.25	0.04
1911	13.63	14.36	.68	.....	.....	.....	.....	.....	.....	.29	.30	.01
1910	14.57	15.18	3.68	.....	.....	.....	.....	.....	.....	.28	.29	.06
1909	20.29	20.74	7.65	.....	.....	.....	.....	.....	.....	.41	.42	.13
1908	24.12	24.33	11.05	.....	.....	.....	.....	.....	.....	.49	.49	.14
Estivo-autumnal:												
1912	.96	1.00	.....	.....	.....	.....	.....	.....	.....	.03	.03	.....
1911	.89	.94	.....	.....	.....	.....	.....	.....	.....	.04	.04	.....
1910	1.36	1.39	1.00	.....	.....	.....	.....	.....	.....	.05	.05	.03
1909	1.96	1.99	1.02	.....	.....	.....	.....	.....	.....	.07	.07	.03
1908	2.09	2.11	1.38	.....	.....	.....	.....	.....	.....	.08	.08	.04
Malarial cachexia and undetermined malarial fevers:												
1912	.84	.77	2.41	.....	.....	.....	.....	.....	.....	.02	.02	.01
1911	.16	.17	.....	.....	.....	.....	.....	.....	.....	.02	.02	.....
1910	.43	.46	.....	.....	.....	.....	.....	.....	.....	.03	.03	.....
1909	.80	.83	.....	0.02	0.02	.....	.....	.....	.....	.04	.04	.....
1908	.47	.48	.....	.....	.....	.....	.....	.....	.....	.01	.01	.....
Total malarial diseases:												
1912	14.22	14.65	4.42	.....	.....	.....	.....	.....	.....	.30	.31	.06
1911	14.68	15.47	.68	.....	.....	.....	.....	.....	.....	.35	.36	.01
1910	16.36	17.02	4.69	.....	.....	.....	.....	.....	.....	.36	.37	.09
1909	23.06	23.57	8.67	.02	.02	.....	.....	.....	.....	.51	.53	.16
1908	26.69	26.91	12.43	.....	.....	.....	.....	.....	.....	.58	.59	.18

TABLE No. 20.—*The 10 posts of more than 200 (officers and men) in the United States having the highest admission rates for malarial diseases, 1912 compared with 1911.*

[Ratio per 1,000 of mean strength.

Posts.	Mean strength.		Malarial diseases—total ratio.	
	1912	1911	1912	1911
Fort Washington, Md	499	420	172.34	333.33
Fort Logan H. Roots, Ark	264	279	90.91	60.93
Jefferson Barracks, Mo	1,224	1,229	90.69	25.22
Washington Barracks, D. C	649	658	84.75	185.41
Fort Bliss, Tex	567	381	58.21	5.25
Fort Clark, Tex	401	301	54.86	16.61
Fort Howard, Md	456	406	46.05	56.65
Fort Caswell, N. C	337	323	38.58	37.15
Fort Crockett, Tex	234	122	38.46	24.59
Fort Ontario, N. Y	205	211	34.15	.....

Fort Washington this year, as for the last several years, has the unenviable reputation of having the highest admission rate for any post in the United States. The rate in 1912 was 172.34 per 1,000 as compared with 333.33 in 1911, 237.29 for 1910, 215.77 for 1909, 144.30 for 1908, 363.64 for 1907, and 736 for 1906.

* * * * * * *

The total admission rate for malarial fevers for the Army was 40.00. The comparative rate for 1911 was 25.18, and for 1910 was 28.99. This increase in the rate for American troops, total Army, when there was a decrease for the rate in the United States, is due to the as yet unexplained marked increase in the rate for the Philippine Islands, the rate there for American troops being 171.00 as compared with 75.56 for 1911. The rate in the Philippines in 1912 was higher than it has been in any year since 1906, when it was 304.20. This increase can be attributed to a certain extent to the large amount of field service which the troops have had in the district of Mindanao. This, however, can not explain the general increase in rate, for with the exception of Fort Mills, Warwick Barracks, and Torrey Barracks, there was an increase in the rate at every post in the Philippines occupied by American troops. The Scouts, who were as actively engaged in field service as the American troops, showed a slight decrease over last year, the rate for 1912 being 241.91 as compared with 242.12 per 1,000 for 1911.

TUBERCULOSIS.

The following tabulation shows for the total American Army, and separately for the different countries where the Army has been stationed continually, the case rate for tuberculosis (all) for enlisted men for the last five years. In this tabulation all readmissions during each year have been eliminated, so that the actual occurrence of tuberculosis (all) is shown.

Tuberculosis (all)—Enlisted men cases only.

Year.	United States.	Philippine Islands.	Alaska.	Hawaii.	Transports.	Total.
1912	3.25	5.02	4.18	2.07	2.74	3.49
1911	3.64	3.77	2.68	1.99	1.76	3.55
1910	3.34	5.46	1.85	4.10	0.80	3.65
1909	4.53	5.06	3.76	2.96	3.00	4.53
1908	3.99	6.10	2.96	3.92	3.46	4.39

It is extremely interesting to note that the case rate for the total Army, and for that part stationed in the United States and the Philippine Islands, has steadily diminished year by year during the last five years, the only exception being that the rate for the Philippine Islands was higher in 1912 than in 1911 when it was abnormally low, and the slight variation from year to year in previous years in the rate for the United States. This decrease is no doubt due to improved sanitation and to the care with which applicants for enlistment are examined at recruiting depots. Owing to the small average number of men in Alaska, Hawaii, and on transports, the figures for these places are of small value. For Hawaii, however, the rate for 1912 is below the average for the last five years, and that for the transports is lower than for two out of the other four years.

The following tabulation shows for the total American Army, and for that part stationed in the United States and the Philippine Islands, the rate for tuberculosis (all), for discharges for disability, for deaths, and noneffectiveness for the last three years.

	Year.	Discharged for disability.	Deaths.	Noneffective.
Army, American troops	1912	1.56	0.31	1.40
	1911	2.88	.44	1.35
	1910	4.02	.28	1.60
American troops, United States	1912	1.67	.27	1.65
	1911	2.85	.52	1.63
	1910	4.01	.25	1.87
American troops, Philippine Islands	1912	1.46	.57	.53
	1911	3.77	.08	.29
	1910	4.54	.41	.41

An examination of Table No. 21 showing the occurrence of tuberculosis at Army posts in the United States, shows that Vancouver Barracks had the highest rate in 1912 as in 1911.

TABLE No. 21.—*Tuberculosis (all) at Army stations, United States, continental (excluding Alaska), year 1912, compared with 1911 and 1910, enlisted men.*

	Admissions.					
	1912		1911		1910	
	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.
Vancouver Barracks, Wash	23	17.58	22	21.96	9	7.98
Fort Slocum, N. Y	11	8.64	3	2.44	7	7.24
Fort Sam Houston, Tex	10	9.65	5	3.10	4	2.51
Columbus Barracks, Ohio	8	6.83	6	4.72	5	4.80
Jefferson Barracks, Mo	8	6.66	2	1.66	5	5.10
Presidio of Monterey, Cal	7	8.86	1	1.32	2	2.10
Presidio of San Francisco, Cal	7	3.66	11	5.60	13	5.42
Fort McDowell, Cal	6	9.13	6	7.52	1	1.72
Fort Leavenworth, Kans	5	2.52	2	1.63	3	1.55
Fort Andrews, Mass	4	9.52	1	2.39	1	2.55
Fort Benjamin Harrison, Ind	4	5.71	1	5.59	6	7.70
Fort D. A. Russell, Wyo	4	1.83	7	4.29	8	3.48
Fort Flagler, Wash	4	13.25	1	3.18	1	3.08
Fort Hancock, N. J	4	5.51			1	1.19
Fort Barry, Cal	3	9.65			2	6.62
Fort Jay, N. Y	3	8.17	1	3.39	2	6.35
Fort McPherson, Ga	3	4.12				
Fort Riley, Kans	3	1.61	2	1.10	2	1.04
Walter Reed General Hospital, Takoma Park, D. C	3	19.11	3	21.43	1	7.81
Letterman General Hospital, San Francisco, Cal			11	41.20	9	31.47
General Hospital, Fort Bayard, N. Mex	1	7.81	8	64.00	7	56.91
Fort Hamilton, N. Y			5	11.06	2	3.82
Fort Baker, Cal	2	5.18	4	10.84	5	11.79
Madison Barracks, N. Y			4	8.06		
Fort Adams, R. I	1	1.81	3	5.43	1	1.61
Fort Barrancas, Fla	2	3.71	3	6.45	2	3.63
Fort Du Pont, Del	1	1.84	3	7.21	3	5.70
Fort Ethan Allen, Vt	2	2.65	3	3.88	1	1.43
Fort George Wright, Wash	1	1.89	3	6.40	1	2.42
Fort Lincoln, N. Dak			3	11.67	3	15.63
Fort Logan, Colo	2	3.19	3	5.24		
Fort Mackenzie, Wyo	2	3.68	3	8.77	1	2.08
Fort McIntosh, Tex	2	8.30	3	9.49		

TABLE No. 21.—*Tuberculosis (all) at Army stations, United States, continental (excluding Alaska), year 1912, compared with 1911 and 1910, enlisted men*—Continued.

	Admissions.					
	1912		1911		1910	
	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.
Fort Oglethorpe, Ga	1	1.25	3	9.84	2	2.99
Fort Totten, N. Y			3	4.72	1	1.38
Fort Myer, Va	2	2.93	2	3.07	4	4.97
Fort Porter, N. Y	2	10.99	2	8.73	3	12.15
Fort Monroe, Va	1	.81	1	.93	5	4.09
Fort Robinson, Nebr	2	3.60	1	2.15	4	8.68
Fort Snelling, Minn			1	2.17	4	3.99
Alcatraz Island, Cal					3	18.63
Boise Barracks, Idaho					3	25.42
Fort Des Moines, Iowa	1	1.45			3	4.95
Fort Thomas, Ky					3	6.40
Washington Barracks, D. C					3	5.58
9 posts not included above had 2 cases each, 1912	18					
13 posts not included above had 2 cases each, 1911			26			
12 posts not included above had 2 cases each, 1910					24	
19 posts not included above had 1 case each, 1912	19					
13 posts not included above had 1 case each, 1911			13			
16 posts not included above had 1 case each, 1910					16	
Field, miscellaneous	8		30		10	
Total	190	3.25	215	3.89	196	3.52

* * * * * * *

UNDETERMINED FEVERS.

The admission rate for these fevers for the United States was 1.94 per 1,000 as compared with 2.50 for 1911, 2.42 for 1910, 2.15 for 1909, and 3.80 for 1908. The rate was higher in Alaska there being three cases in 1912, and only one in 1911. It was much higher in the Philippine Islands being 15.46 per 1,000 as compared with 6.74 in 1911. The rates for Hawaii, the Canal Zone, and the Transports were lower. The total rate was 4.08 per 1,000 as compared with 3.37 for 1911, and 3.89 for 1910. The different diagnosis included under this heading and the number of admissions are given in the following table:

TABLE No. 23.—*Undetermined fevers, 1912, American troops, by countries—Enlisted men.*

Diseases.	United States (continental), excluding Alaska.	Alaska.	Hawaii.	Philippine Islands.	Canal Zone, Panama.	China.	Army transports.	Total.
Febricula	39	3		104	1	2	1	150
Fever, simple continued	12		8	34				54
Fever, type undetermined	55			53				108
Ephemeral fever	7							7
Total	113	3	8	191	1	2	1	319
Ratio per 1,000 of mean strength	1.94	2.51	2.37	15.46	1.29	1.82	0.91	4.08

MENTAL ALIENATION.

It is impracticable to compare the admission rate for this class of disturbances with the rate for diseases formerly classified and published under the term "insanity." The diseases included under the term "mental alienation," used in the present nomenclature which was put into use January 1, 1912, includes several conditions not included under the term insanity, such as defective mental development, constitutional psychopathic state, hypochondriasis, and nostalgia. The case admission rate for this class of diseases was 3.26 per 1,000 and the discharge rate was 2.78.

ALCOHOLISM.

The admission rate for alcoholism in the United States for the year 1912 was 16.67, which is quite a material improvement over the preceding year, when it was 20.31. It is gratifying to observe that this rate has shown a steady diminution since 1907, following an equally steady rise for eight years before 1907. It is interesting to note that the rate for 1912 is the lowest for any year since 1870, except for the year 1898, when the rate was approximately 16 per 1,000. As this was a year of war, when such rates are usually lower, it can hardly be taken as a basis of comparison. These rates do not represent the amount of intemperance existing in the Army, but as they are all calculated from similar data—that is, the number of cases in which medical assistance was invoked to avert danger—they are useful as an index of alcoholic excess. This marked decrease in the admission rate for 1912 is believed to be largely due to the effect produced by the act of Congress stopping the pay of officers and enlisted men when incapacited for duty on account of sickness due to drug addiction, alcoholism, or other misconduct.

SMALLPOX.

Only 6 cases of smallpox occurred during the year. There was no death. In 1911 there were 4 cases without a death.

DIPHTHERIA.

At Fort Sam Houston an epidemic of this disease, which started in December, 1911, continued until January 19, 1913, when the last case occurred. During the epidemic there were 31 cases, including 6 general prisoners and 3 officers. Eleven of these cases, including 2 among general prisoners, occurred in December, 1911. At Fort Benjamin Harrison in November, 1912, there was a small epidemic of 9 cases, including 1 medical officer and 3 children residing on the reservation. During the year 76 cases occurred. There was no death and no discharge resulting.

MEASLES.

During the year 1912, 426 cases of measles occurred in the United States, with 12 deaths and 6 discharges. In 1911 there were 1,101 cases, with 25 deaths.

Two hundred and one cases, with the 12 deaths and the 6 discharges, occurred in 1912 at Columbus Barracks during the extensive epidemic there, mentioned on pages 79 and 80 of the last report of this office. Since this epidemic was stamped out no other extensive one has occurred, though there have been small epidemics reported at a number of posts.

CEREBROSPINAL MENINGITIS.

Ten cases of this disease with 4 deaths occurred in the Army in the United States during 1912. Between January 1 and June 2, 1913, 13 cases, with 4 deaths and 3 discharges, occurred at Jefferson Barracks, Mo.

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INFLUENCE OF STATION.

The posts having the highest noneffective rate this year are Fort Bliss, Tex.; Fort Sam Houston, Tex.; and Fort Huachuca, Ariz., in the order named, the rates being, respectively, 40.94, 39.03, and 32.81 per 1,000. It will be noticed, by referring to the column for the average number of days lost for each case, that Fort Bliss and Fort Sam Houston have the unenviable reputation of standing first and second, respectively, with rates of 19.44 and 15.30. In other words, each case admitted to hospital at Fort Bliss remained on sick report for an average of 19.44 days.

The posts having the highest admission rate for the year are Jackson Barracks, La.; Fort Washington, Md.; and Fort Clark, Tex., in the order named. The rates were 1,293.88, 1,054.11, and 1,052.37 per 1,000. As is stated repeatedly in this report, however, the noneffective rate is the true measure of the effect of sick report upon military efficiency. The noneffective rate at these three posts having the highest admission rate was much lower than the three posts mentioned with the highest noneffective rates, and also lower than several others not mentioned. The average number of days' treatment for each case at Jackson Barracks was 7.53, at Fort Clark 10.11, and at Fort Washington 7.86.

The five posts having the lowest noneffective rates for this year are all Coast Artillery posts. The first three of these posts are Fort Warren, Mass.; Fort Dade, Fla.; and Fort Williams, Me., with noneffective rates, respectively, 5.79, 6.58, and 6.91. The average number of days' treatment for each case at these posts was, respectively, 8.08, 6.10, and 5.42.

The three posts having the lowest admission rates were Fort Warren, Fort Lawton, and Fort Hamilton, with rates, respectively, of 262.01, 335.23, and 350.26. The noneffective rate for Fort Warren is given in the last paragraph; that for Fort Lawton was 11.88, and the average number of days for each case at that post was 12.97.

Of the recruiting depots, Fort Slocum, N. Y., as last year, had the highest noneffective rate, 51.90, and Fort McDowell, Cal., as last year, the lowest, 29.72. Fort McDowell had the highest average number of days' treatment for each case, 12.72, and Columbus Barracks, Ohio, the lowest, 9.68. Columbus Barracks had the highest admission rate, 1,720.50, and Fort McDowell the lowest, 855.24. The highest

death rate occurred at Columbus Barracks, 13.39 per 1,000, and the lowest at Fort McDowell, where no death occurred.

The Western Division had the lowest noneffective rate, this being 16.41 per 1,000, as compared with 16.67 for the Eastern and 23.86 for the Central. The Eastern Division had the lowest admission rate, being 660.72 per 1,000, as compared with 676.64 for the Central and 684.48 for the Western. The Eastern Division also had the lowest death rate, this being 3.44 per 1,000, as compared with 3.70 for the Western Division and 4.27 for the Central. The Western Division had the lowest average number of days' treatment for each case, this being 8.77 days, as compared with 9.23 for the Eastern Division and 12.90 for the Central.

INFLUENCE OF RACE.

The white troops had higher rates than the colored for noneffective, admissions, and discharges, being 27.23, 745.97, and 14.77, as compared with 25.15, 575.56, and 8.04 per 1,000. The death rate for colored troops was, however, higher, being 7.23, as compared with 4.44. These comparisons were also true for 1910 and 1911.

For venereal diseases the rate for the white troops was 116.24, and for the colored 104.50; for alcoholism the rate for the white troops was 17.11, and for the colored 6.83; for tuberculosis (all kinds) the rate for white was 3.27 and for the colored 2.81; for bronchitis the rate for white was 38.47 and for the colored 32.96; for diarrhea and enteritis the rate for the white was 23.69, and for the colored 22.91; and for rheumatism, articular (all), the rate for colored was 10.45 and for the white 9.75.

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INFLUENCE OF AGE AND LENGTH OF SERVICE.

The youngest soldiers and those serving their first enlistment had, as usual, the highest admission and discharge and noneffective rates, and the death rate was highest among those 45 years of age or over, having 10 years or more of service. The lowest admission and the lowest constantly noneffective rate occurred in soldiers between 35 and 40 years of age.

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SANITATION, UNITED STATES.

The sanitary conditions throughout the Army for the year were exceptionally good. Very few sanitary defects of any importance were reported on the monthly sanitary reports, and when the attention of the authorities was called to such defects, as existed by these reports, they were usually corrected with promptness, except in cases where large appropriations of money were required.

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SERVICE CAP AND CAMPAIGN HAT.

The obligatory use of the service cap for constant use in posts is still commented upon adversely by surgeons and commanding officers.

This office has several times recommended that the commanding officer be authorized to prescribe the campaign hat whenever the climatic conditions, in his opinion, render such necessary.

SHOES.

Mention was made in the last annual report of the work of the board at Fort Leavenworth, of which Maj. E. L. Munson, Medical Corps, was president, for the selection of a proper shoe for the Army. It was stated in that report that as the result of the work of this board, it was believed that a suitable shoe had been obtained. During the past year it has been necessary to issue such shoes as were on hand. The supply is now almost exhausted, and the new shoes are just now beginning to be issued. Attention is again called to the fact that the shoe can not be fairly considered by itself alone, since its actual utility depends upon the construction, supply, and fit. The fitting must be supervised by officers, who must instruct themselves accordingly. During the present year an officer who had been recommended for action by a retiring board, was ordered to one of the general hospitals, on account of a painful foot. Although there had been considerable correspondence about this officer's case, and he had been advised as to the kind of shoes which would probably be suitable for him, yet when he reported at the general hospital it was found that he was wearing shoes which did not fit him and which were entirely unsuitable for any human foot. A most excellent book, embodying the experience of the board at Leavenworth, has been written by Maj. Munson and published. This book should be carefully studied by all officers and noncommissioned officers who are concerned in the fitting of shoes.

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SANITATION, SECOND DIVISION.

CAMPS AT TEXAS CITY AND GALVESTON.

These camps have been occupied since February 27, 1913. The health of the troops has been at all times excellent. It is interesting to note that not a single case of typhoid fever has developed in either of these camps, or in fact in any of the camps along the Mexican border in 1913. Lieut. Col. W. B. Bannister, Medical Corps, has been chief surgeon, with Maj. R. B. Miller as sanitary inspector at the camp at Texas City, and Maj. F. M. Hartsock, sanitary inspector at the Galveston camp.

The following extracts are from the report of the chief surgeon, July 1, 1913:

TEXAS CITY CAMP.

The original camp site for the Fourth and Sixth Brigades were selected by line officers prior to the arrival of troops, and when headquarters arrived February 27 pipe lines were in place, but the camp site was swampy and with considerable standing water, so that the tents could not be arranged in regular order, and the ground was so level and low and at such distance from the bay front as to present great difficulties in drainage. The troops were pouring in, and it was necessary to locate them temporarily on the site selected till further observation of the terrain permitted the selection of a more sanitary site. By March 3 the division was complete. It was this original camp site that brought about the complaints and criticism with regard to the Texas City encampment, but the commanding general of the Second Division had no voice in the original selection.

A new camp site on the bay front was selected and prepared in advance of occupation by ditching, under supervision of the engineers. Gravel walks were made and tent sites tamped and graveled. On March 13 and 14 the Sixth Brigade occupied the new camp site and the Fourth Brigade on March 22. The new site could be easily drained into the bay, and has proved an excellent selection, as it becomes dry very soon after the heaviest rains we have so far encountered. The soil of the original camp site was composed of clay almost impervious to water for about three feet and then a layer of sand, and this conformation caused difficulties that will be discussed under a different heading.

Water is piped to the camp and is furnished by two artesian wells.

All men requiring it were vaccinated against smallpox. The typhoid prophylactic was administered to all residents of the camp 45 years of age or under, either soldiers requiring it or civilian employees and servants. The sale of articles of food in camp, except such as could be purchased from commissary and authorized exchanges, was prohibited.

The sanitary condition of the grounds was placed under the jurisdiction of each regiment which maintained regimental sanitary squads, under orders of the regimental surgeon.

Sanitary conditions of the grounds not under regimental jurisdiction was maintained by a sanitary squad, composed of four civilians hired by the quartermaster's department, and under orders of the sanitary inspector of the division, who was also charged with the supervision of the sanitary condition of the entire camp. The attention of the regimental surgeon was called to any sanitary defects discovered at these inspections; and if they were not promptly corrected the sanitary inspector left notes with the regimental adjutant concerned. If this failed to promptly effect the purpose, report was made to division headquarters. The latter reference was necessary in but rare instances, thus avoiding a considerable volume of correspondence. All officers and enlisted men were required to sleep under mosquito nets, and the few cases of malarial fever imported to camp were treated in a specially screened ward in the field hospital.

Flies are destroyed by fly traps, swatting squads, and the use of condensed milk and formalin, as follows: To each cup of 1 part of water and 3 parts of condensed milk is added 1 to 2 teaspoonfuls of formalin. This is placed in saucers and is very effective. The fly traps are of various sizes, either round or rectangular, and consist, essentially, of a light wooden frame supporting wire netting, inclosing a space, except at the bottom of the trap, in which is a round hole about 3 inches in diameter. Around the margin of the hole is attached a truncated cone of wire netting, the top of the cone extending up into the inclosed space. These traps are provided with supports to hold them about 2 inches above the support on which they rest, and under the central hole at the bottom is placed a saucer containing the bait. The bait consists of sweetened water, meat, or, the most effective of all, chicken entrails. The traps are set outside the screened kitchens, and it is surprising to see the number of flies that are caught. Each company uses from four to eight traps.

The method employed for the disposal of excreta consisted of pits from 5 to 7 feet deep, according to the depth at which the ground water was reached. These pits were covered by boxes provided with 10 holes, with tops automatically closing to make them fly proof. The boxes were tipped back each day and the pits burnt out, with 14 pounds of straw and 1 gallon of crude petroleum per pit, each day. The urinals covered 2 of the 10 holes, and the projection in the bottom slipped through a hole bored in the top of the latrine box, allowing 8 holes for use; but this was found amply sufficient for each company. This method of using the urinals was made necessary by the fact that the fences inclosing each latrine were built before the urinals were received, and there was not sufficient room between the fences and the latrine boxes to use the urinals the way they were constructed to be used. The method has proven very satisfactory. By coating these urinals with crude petroleum no fly will light in them. It was found that in tipping back the latrine box to burn out the pits the weight of the box caved in the edge of the pit, so that the contents of the pit was accessible to flies. This was avoided by a footboard extending entirely around the latrine box, with a strip of wood marking out on the foot a space sufficient to just receive the latrine box. This footboard also prevents men sitting on the latrine box from caving in the front edge of the pit.

The picket lines are cleaned each day and the manure hauled to a common dumping ground, where it is distributed in windrows and burnt over. These windrows are 8 or 10 feet apart, so as to allow space, when the manure is wet by rain, to spread the heaps out to dry. The picket lines are burnt over with hay and crude petroleum once each week.

The waste of each company and separate unit is disposed of in kitchen incinerators, and that portion of the waste that is indestructible by fire, such as tin cans, etc., after sterilization in fire, are buried.

As this encampment is immediately contiguous to Texas City and the enlisted men frequent cafés, restaurants, saloons, etc., and officers' families reside in the hotels, the sanitary conditions of these establishments and of the town was of serious importance to this command. After consultation with the health officer and mayor and with their concurrence, a sanitary inspector was detailed on this inspection duty in Texas City. The object of this inspection was to see that the garbage from restaurants was properly disposed of, etc., that food exposed for sale was protected from flies, that ice boxes were provided for meats, etc., and that open privies were made fly proof, and that premises were kept clean. In the case of cafés, restaurants, and saloons, if the recommendations were not carried out, the provost guard of the city was notified and a sentry was stationed in front of the offending establishment and no soldiers permitted to enter until the sanitary inspector requested the removal of the sentry. In case of a dispute between the proprietor and the sanitary inspector the division surgeon personally inspected the premises and decided whether the sentry should be removed or not. This was necessary in only two instances. As the places referred to are entirely dependent on soldier patronage, the method was very effective. In case of hotels, the kitchens, ice boxes, and premises were inspected with the consent of the proprietor and defects reported to him by the sanitary inspector. The control of the sanitation of a town by the military and the concurrence of its inhabitants, even where saloons, restaurants, etc., were temporarily closed, with scarcely any friction was a matter of considerable surprise to the division surgeon who inaugurated the method somewhat as an experiment. This, I believe, will be successful only where the business interest concerned is dependent on soldier patronage, and where the inhabitants understand that in case of an undue amount of sickness the command would be moved elsewhere.

GALVESTON CAMP.

The Fourth, Seventh, and Nineteenth Infantry were camped on the parade grounds of Fort Crockett. The Twenty-eighth Infantry was encamped on low-lying sandy soil on the sea front.

The water supply comes from artesian wells on the mainland, 17 miles inland at Alta Loma, and is piped to camp. The quality of the water is excellent.

In the camp of the Fifth Brigade, three regiments, the Fourth, Seventh, and Nineteenth Infantry, had toilets provided with four galvanized tin troughs opening into a common center, flushing into sewer mains by means of water taps at each end. Board seats were provided, covered, and sheltered by wood fences. Urine troughs made of tin were provided in every toilet and flushed with running water. The water system was kept so that a continuous small stream was provided at all times, large 2-inch faucets were utilized in addition to flushing thoroughly twice daily the entire system. This latter flushing was handled by a sanitary squad from each regiment under the direction of a sanitary sergeant and the supervision of the sanitary inspector, Fifth Brigade. Disposal of excreta in the Twenty-eighth Infantry camp was by means of earth latrines covered by latrine boxes, with the usual daily incineration, for the first six weeks. Owing to the frequent caving in of the latrines, eight old pattern McCall incinerators were installed for this regiment and the latrine system discontinued. In other respects the sanitary means employed in this camp were the same as employed in the camp at Texas City.

SANITARY INSPECTION OF THE CAMPS AT TEXAS CITY AND GALVESTON, TEX., BY LIEUT. COL. J. R. KEAN.

Soon after the camp was established at Texas City repeated reports were received in the War Department from interested civilians to the effect that the health of the troops could not be maintained at that camp site. The Secretary of War directed Lieut. Col. J. R. Kean, Medical Corps, to proceed there and make a special sanitary inspection. He arrived on March 17, and spent several days in inspecting the camps. He reported that—

To sum up the advantages of the two points, Galveston has in its favor: (1) It will be cooler; (2) more free from mosquitoes; (3) much greater facilities for the amusement of officers and men; (4) a sewered camp site for most of the troops; (5) less mud in prolonged wet weather.

On the other hand, Texas City has in its favor: (1) The fact that the troops are now established there and have expended much labor to make their camp site comfortable and sanitary; (2) its sanitary arrangements are all completed and are satisfactory from a hygienic point of view.

It is the opinion of the undersigned that the health of the troops at Texas City can be maintained at a satisfactory standard without moving the camp. A transfer to Galveston will, however, much promote the comfort, amusement, and contentment of the command.

He found that at the camp at Galveston—

There seems to have been much delay in providing latrines for the Twenty-eighth Infantry, and for the first three weeks they used shallow trenches without box seats, a primitive method which would have made trouble had the weather been warmer, as the eggs of flies deposited in fecal matter hatch out and develop in spite of burying, and the fully developed fly still retains in its intestines infectious material on which the larvæ may have fed.

The finishing touches were being put on the Havard sink boxes by the company artificers the day of my inspection, the 17th, and urine troughs were not yet installed.

He recommended that—

Latrines and kitchen incinerators are necessary as soon as troops arrive at a camp, in order to avoid improvised methods of disposal which pollute the camp site, and therefore steps should be taken to provide them in advance of the arrival of troops.

For the methodical and sanitary preparation of camp sites, it is recommended that in every case where a command larger than a regiment is placed in camp that an engineer officer, a medical officer, and a quartermaster be ordered in advance to prepare the camp site. The medical officer should if possible be either the sanitary inspector of the department or of the division to which the troops belong.

Veterans' Camp at Gettysburg, Pa., 1913.

Lieut. Col. Alfred E. Bradley, Medical Corps, chief surgeon of this camp, reported in part as follows:

The veterans' encampment at Gettysburg, Pa., July 1 to 4, 1913, was first designed to accommodate 40,000 veterans.

I was designated chief surgeon of the camp on June 6, 1913, and proceeded on June 7 to Gettysburg to inspect the camp to determine just what sanitary measures were indicated, and what arrangements should be made to care for the sick. It was thought that the advanced age of the men the camp was to shelter, the season of the year, and the long journey many would take to reach the camp would result in unusual morbidity, and probably a large mortality.

It was my belief that the hospital provisions which had already been made, namely, one field hospital and three regimental hospitals, would not be adequate, and recommendations were made that another field hospital and more sanitary personnel be provided, and supplies and equipment be furnished so that these hospitals could be expanded to accommodate at least 1,000 sick. I was informed at this time by Maj. Normoyle, Quartermaster Corps, in charge, that 55,000 veterans were expected, and that the civilian employees of the camp would total more than 2 000. My estimate was therefore based on less than 2 per cent sick, which seemed to me to express the minimum requirements. My recommendations were approved and Field Hospital No. 1 was ordered from Fort D. A. Russell, Wyo., additional personnel was ordered (G. O. 26, H. E. D., June 14, 1913), supplies were provided, and to meet the emergency a sufficient number of regular medical officers not being available, 23 Medical Reserve Corps officers were ordered into active service for duty from June 28 to July 10, 1913.

During the encampment 741 ambulance calls were responded to and 1,100 patients were transported.

The personnel, commissioned and enlisted, provided was found to be not at all in excess of that needed. For a period of 48 hours the demands were such that the day was 24 hours long for all. But little time was available for rest or sleep. A less number of officers and men would have been unable to meet the demands made upon the Medical Department during the busiest days.

In assigning and distributing the personnel efforts were made to make provision for prompt first aid. To this end 11 aid stations were established in the camp proper, which, with the 5 hospitals, provided 16 places where first aid could be promptly secured.

Under command of Maj. R. U. Patterson, Medical Corps, the American Red Cross Society, acting as an auxiliary to the Medical Department, operated 14 first-aid and rest stations on the battlefield park roads, over which great crowds passed during the days of the encampment. Red Cross nurses were also assigned to duty with the field hospitals, 13 to each hospital, and did excellent work. Nine persons died, 8 being Federal veterans and 1 a Confederate veteran.

The department of health, State of Pennsylvania, made ample provisions in Gettysburg for the care of the great crowds which poured into that small town. An emergency field hospital was established which cared for many hundreds of patients. First-aid and comfort stations were established in various parts of the town and at the great assembly tent outside the camp proper.

The water was obtained from artesian wells put down for the purpose on the camp site. It was pumped into storage tanks and distributed by gravity. It was of excellent quality and ample in quantity for all purposes. Bubbling drinking fountains supplied by a coil of pipe passing through packed ice made ice water available for drinking purposes throughout the camp, which was a source of much comfort to all during the intensely hot days.

The weather during the early days of the encampment was intensely hot, the thermometer registering on July 2, in one of the hospital tents, 103½° F.

There were many prostrations from heat and many cases of exhaustion. Seven hundred and forty-four cases (all kinds) were admitted to hospitals, and a total of 9,986 received professional aid or treatment during the encampment. This does not include the many thousands who availed themselves of Medical Department provisions for shelter, rest, and water.

It is said that on July 2, 57,400 were subsisted at the camp. Estimates vary as to the actual number of veterans at the camp, but it seems to be the concensus of opinion that there were not less than 55,000. The time of the encampment extended over a period of eight days, June 29 to July 6, and it is believed that the daily average for those days will approximate 40,000. This indicates that the annual death rate for the period was at the rate of about 10 per 1,000 less than the normal death rate of any community of like size.

It is difficult to get accurate data as to numbers, but it is believed that the above estimates are conservative. It must be admitted that the mortality, the death rate, under the conditions is most remarkably low. The age factor alone would indicate an expected rate far above a normal rate.

The youngest veteran known to have been at the camp was 61 years of age. The oldest alleged that he was 112 years. The average age was probably well over 70 years.

The camp was unique; surely never before in the world's history have so great a number of men so advanced in years been assembled under field conditions.

The sanitary measures used in this camp were similar to those used in military camps in the last few years, and here, as elsewhere, they proved very satisfactory.

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PHILIPPINE ISLANDS.

AMERICAN TROOPS.

The improvement in the health of the American troops stationed in the Philippines noted in the annual reports of this office for several years past was not maintained in the year 1912. As shown in Table No. 3 the constantly noneffective rates for all causes and for diseases were both higher in 1912 than in 1911. The same is also true in regard to admission rates, both the total admission rate and the admission rate for diseases being higher than for 1911. These admission rates were also higher than they were in 1910 and in 1909.

The mean strength of the American troops stationed in the Philippine Islands during the year was 12,357 (S. G. O.). Of this number, 11,006 were white troops and 1,351 colored. In addition there were the Philippine Scouts with a mean strength of 5,407 (S. G. O.), for whom the medical statistics will be given separately on page 112.

CONSTANTLY NONEFFECTIVE RATES.

The total constantly noneffective rate for the year was 44.74; that for the white troops being 44.32, and for the colored 48.10. As has been stated elsewhere the cause for the excessively high noneffective rate for the colored troops was due to the unusually high noneffective rate for venereal diseases for these troops in the Philippines, the rate for this cause being 21.70. The total noneffective rate in 1911 was 43.15 and in 1910 was 45.45. As there were no colored troops stationed in these islands during 1910 and 1911, no comparison can be made with the figures for colored troops for 1912.

The total noneffective rate for disease in 1912 was 39.85 per 1,000, as compared with the corresponding rate of 37.83 for 1911, and 40.34 for 1910.

The following tabulation shows the noneffective rate for some of the principal diseases:

Higher in 1912 than in 1911.

Disease.	1911, total.	1912		
		Total.	White.	Colored.
Malarial fevers	1.78	3.51	3.80	1.14
Dysentery	.90	1.12	1.21	.39
Tuberculosis, all	.29	.53	.47	1.05
Diarrhea and enteritis	.92	1.05	1.07	.89

Lower in 1912 than in 1911.

Disease.	1911, total.	1912		
		Total.	White.	Colored.
Typhoid fever	0.20	0.09	0.10	.....
Venereal diseases	16.63	16.55	15.92	21.70
Dengue	1.99	1.90	1.69	3.67
Alcoholism	.43	.35	.36	.26
Rheumatism	.62	.44	.34	.30

It will thus be seen from this tabulation that the principal cause of the increase in the noneffective rate for disease was the rise in the rate for the malarial fevers, the rate increasing from 1.78 in 1911 to 3.51 in 1912. It is interesting to observe that notwithstanding the unusually high noneffective rate for venereal diseases for the colored troops, that due to the decrease in this rate for the white troops, it being 15.92 in 1912 as compared with 16.63 in 1911, the total rate for these diseases in the Philippine Islands showed a slight decrease. The constantly noneffective rate for injuries was slightly lower in 1912 than in 1911, or 1910, it being 4.89 per 1,000 as compared with 5.32 in 1911, and 5.12 in 1910.

ADMISSION RATES.

As stated on page 16 in the tabulation for 1912 the readmissions for what is obviously the same attack of the same disease have been omitted. During the year there were 15,409 case admissions for all

causes, white and colored troops, and with a mean strength of 12,357, making a case admission rate of 1,246.99, as compared with the corresponding rate of 1,132 for 1911, 1,144 for 1910, and 1,243 for 1909. The case admission rate for disease was 1,075.34, as compared with 947 for 1911, 956 for 1910, and 1,062 for 1909. The case admission rates for white troops for diseases, injuries, and all causes were 1,025.08, 164.36, and 1,189.44 per 1,000, as compared with the corresponding rates for the colored troops, which were, respectively, 1,484.83, 230.94, and 1,715.77 per 1,000.

The cause for the increased admission rate in 1912 was the same as that for the increased noneffective rate, the great increase in the rate for malarial fevers, this being 171 in 1912, as compared with 75.56 per 1,000 in 1911, or an increase of 95.44 per 1,000.

The case admission rate for injuries was 171.64, as compared with 185 for 1911, 188 for 1910, and 185 for 1909. It is thus apparent that the admission rate for injuries was lower in 1912 than it has been for several years previous.

DISCHARGES ON CERTIFICATES OF DISABILITY.

The American soldiers are very rarely discharged in the Philippines, the cases being invalided home and discharged in the United States, but these are, however, credited to the Philippines.

The discharge rate for 1912 was 9.63, as compared with the corresponding rate of 11.64 per 1,000 for 1911. The rate for disease was 8.34 per 1,000 and that for injury 1.29, as compared with the corresponding rates of 10.52 and 1.12 in 1911. The total rate for the white troops was 10.18 and that for colored troops was 5.18.

The diseases causing the highest number of discharges were:

	Absolute numbers.	Rate per 1,000.
Mental alienation	27	2.19
Tuberculosis, all	18	1.46
Venereal diseases	14	1.13

The corresponding rates for mental alienation in the United States was 2.78 per 1,000. As stated in the last report this is of interest in view of the general idea which prevails in this country that so many Americans become insane in the Tropics.

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DEATHS.

Deaths occurring in the United States in persons invalided home from the Philippine Islands are credited to the Philippines. There were 69 deaths in 1912, 37 from disease and 32 from external causes, the total rate being 5.26 per 1,000, that for disease 2.82, and for injuries 2.44. The corresponding rates for 1911, officers and enlisted men, were, total 5.30 per 1,000, diseases 1.93, and injuries 3.37 per 1,000. It is thus apparent that the rate for disease is considerably higher in 1912 and that for injuries it is lower, while the total rate is slightly lower. There were 13 deaths from drowning in 1912 and 8 in 1911; 3 from suicide in 1912 and 9 in 1911; 4 from homicides

in 1912 and 6 in 1911. No officer or soldier, American troops, was killed in action in 1912, while 4 enlisted men and 1 officer were killed in action in 1911.

Tuberculosis caused 7 deaths in 1912 and 1 in 1911; malaria 4 deaths in 1912 and 1 in 1911; syphilis 3 in 1912 and 1 in 1911; organic disease of the heart 1 in 1912 and 5 in 1911.

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PREVALENCE OF SPECIAL DISEASES, AMERICAN TROOPS (ENLISTED MEN).

TYPHOID FEVER.

The admission rate per 1,000 was 0.40, as compared with 0.88 in 1911 and 2.53 for 1910. This rate was higher than that for the American Army as a whole, which was 0.27. In absolute numbers there were 5 cases among the enlisted men, and these occurred at Camp Keithley in men infected while in the field, in that vicinity. None of them had been immunized. There was no death. Especial mention is made of this subject under the discussion for the United States.

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MALARIAL FEVERS.

The admission rate for all fevers of this class was 171.00, as compared with 75.56 for 1911, 86.34 for 1910, 112.35 for 1909, 123.97 for 1908, 167.79 for 1907, and 304.20 for 1906. Malarial fevers stand second among causes of admission for disease for American troops.

It will be noted that the rate for 1912 was higher than that for any year since 1906. The reason for the great increase is not apparent. It is true that the greatest increase occurred in the Department of Mindanao, where the troops were in the field a great deal engaged in operations against hostile natives. However, there was also an increase in the rates for all, except a few, of the posts in the Department of Luzon. The table below gives the rates at all posts in the Philippine Islands where the majority of the garrison was American troops. It will be noted that only four posts showed a decreased rate, namely, Fort Mills, Cuartel de Espana (Manila), Warwick Barracks, and Camp John Hay. It is difficult to understand why field service and meteorological conditions should have caused such a large increase in the rate for American troops without causing same increase in the rate for the native troops, who had fully as much field service and who were exposed to the same meteorological conditions. The rate for the native troops showed a slight decrease, being 241.91 in 1912 and 242.12 in 1911. At the suggestion of this office, a cablegram was sent by The Adjutant General to the commanding general, Philippine Department, June 30, 1913, calling attention to the great increase in the rate for this cause for American troops.

The post having the highest admission rate was Ludlow Barracks, Mindanao, with a rate of 550.00 per 1,000. The second highest admission rate was for Augur Barracks, 459.39 per 1,000. The rates for these posts in 1911 was 51.57 and 279.30, respectively. The Department of Mindanao had the higher rate, 385.52 per 1,000. The rate

for the Department of Luzon was 97.32 per 1,000. The rate for the Department of Mindanao in 1911 was 146.60 and for Luzon 58.90 per 1,000.

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UNDETERMINED FEVERS.

The admission rate for these fevers was 15.46 per 1,000, as compared with 6.74 for 1911, 10.75 for 1910, and 25.46 for 1909. The various diagnoses under this head are as follows:

Febricula	104
Fevers, simple, continued	34
Fever, type undetermined	53
Total cases	191

SMALLPOX.

No case of this disease occurred.

VENEREAL DISEASES.

Venereal diseases still hold first place for both admissions and noneffective rate. About one-fourth of the total number of admissions for disease were due to venereal diseases. There were 1,719 admissions for gonorrhea, 832 for chancroid, and 528 for syphilis. A little more than two-fifths of the total noneffective rate for disease was due to venereal diseases. It is a source of satisfaction to this office, however, to be able to state that the rates for these diseases were better in 1912 than 1911. The noneffective rate in 1912 was 16.55 and in 1911 16.63 per 1,000. The admission rate in 1912 was 249.17, and in 1911 305.12 per 1,000. As has been stated under the discussion for the Army, and for the United States, the rates for the white troops showed a very material improvement, but the excessively high rate for the colored troops prevented a greater decrease in the total figures for the American troops. The noneffective and admission rates for white troops in 1912 was 15.92 and 215.43, and in 1911, 16.63 and 305.12 per 1,000. Those for the colored troops in 1912 were 21.70 and 524.06 per 1,000. There were no colored troops serving in the Philippine Islands in 1911.

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In accordance with the recommendation of this office The Adjutant General, on July 16, 1913, sent a cablegram to the commanding general Philippine Department calling attention to the excessively high rates among the colored troops and the high rates at the three posts other than Camp Jossman, with the highest rates. The colored troops were stationed at Camps Jossman, McGrath, and Stotsenburg.

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ALCOHOLISM AND ITS RESULTS.

The admission rate, 21.20, was lower than 28.50 for 1911. The noneffective rate was 0.35 in 1912 and 0.43 per 1,000 in 1911. The rates for 1911 were for white troops, as there were no colored troops

in the islands. In 1912 the noneffective and admission rates for white troops were 0.36 and 22.17. Those for colored troops were 0.26 and 13.32.

CHOLERA.

No case of this disease occurred during the year, nor were any epidemics reported in the vicinity of military posts.

TUBERCULOSIS.

There were 62 cases among the American troops, a ratio of 5.02 per 1,000. These cases were all promptly transferred home, and no deaths occurred there from the disease. The seven deaths reported occurred in cases transferred to the United States. In 1911 there were 47 cases with a ratio of 3.77 and in 1910, 67 cases, with a rate of 5.46 per 1,000.

BERIBERI.

No case of this disease occurred among the American troops.

DYSENTERY.

The occurrence of this disease shows an increase over 1911, being 16.91 per 1,000, as compared with 14.37 per 1,000 for 1911, 19.39 for 1910, 43.06 for 1909, and 26.23 for 1908. There were 167 cases of entamoebic dysentery, with a rate of 13.51, 11 cases of bacillic, with a rate of 0.89, and 31 unclassified, with a rate of 2.51 per 1,000. The noneffective rate for all dysentery was 1.12 per 1,000 for 1912 and 0.90 for 1911.

DENGUE.

This disease had the third highest admission and noneffective rate. There were 1,346 cases with an admission rate of 108.93 per 1,000 and noneffective rate of 1.90, as compared with 1,444 admissions in 1911, with an admission rate of 115.95 and noneffective rate of 1.99. There were no deaths or discharges for disability resulting.

MENTAL ALIENATION.

As there are several mental conditions grouped this year under this heading which were formerly not included under the term insanity, no comparison can be made between the two. The admission rate for mental alienation was 3.56 for American troops in the Philippine Islands. In the United States the rate was 3.26.

DIARRHEA AND ENTERITIS.

The admission rate for these diseases shows quite a large increase over 1911, being 60.69 per 1,000, as compared with 46.09 for 1911, 74.86 for 1910, and 59.79 for 1909. The noneffective rate was 1.05 per 1,000 in 1912, as compared with 0.92 for 1911 and 1.38 for 1910.

INVALIDING TO THE UNITED STATES.

The diseases causing the highest number of men to be invalided home were with actual numbers: Tuberculosis, 56; mental alienation, 45; gonorrhea, 21; syphilis, 10; and dysentery and chronic alcoholism, each 6.

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INFLUENCE OF STATION.

The Department of Mindanao had the higher rates for admissions, discharges for disability, deaths, and total losses, while the Department of Luzon had the higher noneffective rate and higher average number of days lost for each case.

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INFLUENCE OF SEASON.

Exclusive of injuries, venereal diseases, alcoholism, and vaccinia, which are not influenced by season, the highest admission rate occurred in July and the highest noneffective rate was in July and the second highest in June.

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The highest rate for malarial fevers was in April, and for dengue in August. The lowest admission rate was in February and the lowest noneffective rate in November. The highest death rate occurred in April. As the influence of season varies so widely for the different islands, it is hardly possible to obtain any accurate information by comparing the division as a whole.

INFLUENCE OF AGE (DISEASE ONLY).

Excluding injuries, the highest admission rate was for those under 20 years of age, and the highest noneffective rate for those 20 to 24. The noneffective and admission rates were lowest for those 45 to 49 years. The death rate was highest for those 40 to 44 years of age. The discharge rate was highest for those 25 to 29 years of age.

LENGTH OF SERVICE (DISEASE ONLY).

Excluding injuries the highest noneffective and admission rates occurred in the first year of service; the second highest noneffective and admission rates in the second year; the lowest noneffective and admission in those having 10 years or over. The highest discharge rate occurred in the second year of service, and the lowest in the third. The highest death rate was in those having between five and ten years' service, and the lowest for those in the first year of service.

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PHILLIPPINE SCOUTS.

The improvement in the health of the native troops in the Philippine Islands noted in the annual reports of this office in years past was not maintained in 1912. While the admission rate showed a slight improvement, the noneffective rate was slightly higher in 1912 than in 1911. The mean strength of these native troops during the year was 5,407 (Surgeon General's Office) and 5,493 (Adjutant General's Office).

CONSTANTLY NONEFFECTIVE RATES.

The total noneffective rate for 1912 was 20.32 per 1,000 as compared with 19.86 in 1911. The rate for disease was 17.92 per 1,000 in 1912, and 17.69 in 1911, while that of injuries was 2.40 in 1912 and 2.17 per

1,000 in 1911. Thus the total rates, that for disease and that for injuries, were all higher in 1912 than in 1911. The following tabulations shows noneffective rates of the principal diseases in 1912, and the corresponding rates for 1911:

	1912	1911		1912	1911
Lower in 1912.			*Higher in 1912.*		
Malarial fevers	4.19	4.55	Venereal diseases	3.75	3.63
Dysenteries	.38	.52	Tuberculosis (all)	.91	.34
Typhoid fever	.10	.38	Dengue	.33	.31
Beriberi	.05	.12	Bronchitis	.76	.57
Alcoholism	.003	.004	Febricula	.19	.12

The rate for diarrhea and enteritis was exactly the same in 1912 a in 1911, being 0.26 per 1,000.

ADMISSIONS.

During the year there were 3,667 admissions for all causes, giving a case admission rate of 678.20 per 1,000. The rate for disease was 617.16 and that for injury 61.04 per 1,000. The admission rate for 1911 for all causes was 744.78; for disease, 666.54, and for injuries, 78.24 per 1,000. It is thus apparent that the rates for 1912 were all slightly lower than the corresponding rates in 1911. The following tabulation gives the rates for some of the principal diseases in 1912 and 1911:

	1912	1911		1912	1911
Lower in 1912.			*Higher in 1912.*		
Malarial fevers	241.91	242.12	Dengue	23.12	15.38
Venereal diseases	55.67	58.11	Tuberculosis (all)	5.92	3.23
Dysenteries	7.03	7.79	Bronchitis	28.30	21.65
Diarrhea and enteritis	18.86	20.89	Febricula	10.36	8.55
Typhoid fever	.56	2.28			
Alcoholism	.37	.76			
Beriberi	.37	.57			

It must be held in mind that the rates above for 1912 are case admissions and in 1911 total admissions. The total admission rates for malarial fevers and venereal diseases are slightly higher than the corresponding rates in 1911.

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DISCHARGE FOR DISABILITY.

In 1912 there were 45 discharges on certificate of disability with a rate of 8.19 as compared with 26 and a rate of 4.94 for 1911. Tuberculosis caused 23 discharges in 1912 and 11 in 1911; venereal diseases 2 in 1912 and none in 1911; mental alienation 5 in 1912 and insanity 5 in 1911, and external causes 7 in 1912 and 3 in 1911.

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DEATHS.

There were 24 deaths with a rate of 4.37 per 1,000 in 1912, and 24 with a rate of 4.56 in 1911. There were 4 deaths from tuberculosis in 1912 and 2 in 1911, 3 from malarial fever in 1912 and 3 in 1911, 2 from

pneumonia (acute lobar) in 1912 and 2 in 1911, and 7 from external causes in 1912, and 7 in 1911. There were three killed in action, two by gunshot and one by a cutting weapon. There was one death from suicide and one homicide. In 1911 there was no death in action among these troops.

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SANITATION IN THE PHILIPPINE ISLANDS.

The chief surgeon reports that the sanitary condition of the different posts and the accommodation provided for the troops were generally reported to be satisfactory and no outbreak of disease was attributed to unsanitary conditions. As in 1911, however, there was a certain amount of sickness resulting from field service. As has been noted under "typhoid fever," five men from Camp Keithley, Mindanao, were infected with typhoid fever while on duty in the field. At several posts it was noted by the surgeons that a number of men contracted malarial infections while in the field. The troops in the Island of Mindanao around Camp Keithley and on the Island of Jolo were in the field a part of the year operating against hostile Moros.

PROXIMITY OF NATIVE TOWNS.

As has been noted before, the proximity of native towns to military posts to a certain extent nullify the sanitary measures instituted in the post. The surgeon, Camp McGrath, says:

If this post is to be occupied for any length of time it would seem a sanitary necessity for the Government to rent the land immediately behind the officers quarters, the barrios of Viga and Sambat, for to leave these native barrios so close to the post nullifies much of our own sanitation. I am inclined to believe that three cases of entro-colitis, with one death, in officers families, last September were due to infection from these barrios.

On account of the close proximity of the town of Batangas with 30,000 native inhabitants, and the barrios of Viga and Sambat 100 yards behind the officers quarters and off the reservation, the question of venereal disease at this post presents many difficulties.

Dengue is endemic in Batangas and the barrios immediately adjoining the post and every new batch of troops furnish new material for infection.

We do the best we can to make the people living in them keep their premises clean by frequent inspections and threats; but as a matter of fact, we have no authority in the barrios, nor do the municipal laws, as I understand them, cover the cases sufficiently in a sanitary way. The natives maintain horses, cattle, and pigs immediately around their homes and use open trenches for their own dejecta, conditions allowed by municipal laws; and on account of their poverty must necessarily be allowed. Nevertheless these conditions, so close to our own premises, nullify to a great extent our own sanitary measures.

The surgeon, Pettit Barracks, in speaking of antimalarial measures, says:

Unfortunately we are in juxtaposition with many native shacks and other breeding places of mosquitoes.

At Augur Barracks the surgeon comments as follows on the antiplague measures adopted:

By the use of rat poison and traps and construction of cement floors in all business houses in Jolo and its barrios, the number of rats has been greatly decreased. All ships lying at the dock are required to keep rat guards on all mooring lines and a watchman on the gangway.

It is apparent that these native barrios cause a great deal of sickness in posts and are a great source of danger where epidemics of severe infectious diseases, such as cholera or plague, occur. It is certainly desirable to build all posts away from the vicinity of native barrios.

ANTIMALARIAL MEASURES.

Antimalarial measures are being carried on throughout the islands. The measures are practically the same as those mentioned heretofore, that is, drainage and oiling of pools with other general measures for the prevention or destruction of mosquitos; the enforced use of mosquito nets; and in some cases the use of prophylatic doses of quinine. All infected cases are carefully treated and kept under observation until considered cured. In some few instances efforts are being made to screen the barracks and quarters.

FOOD SUPPLY.

Several epidemics of food poisoning occurred at different posts. These outbreaks were probably due to some bacterial infection of the food, although the specific organism was in no case isolated.

The surgeon at Augur Barracks, in speaking of the prevalence of amebic dysentery, says:

> Most of the cases of dysentery have yielded to the ipecac treatment, but there have been several cases which have recurred several times. Two liver abscesses, only, were found; both were operated on and improvement has been steady in both cases since the operation. The source of dysentery has not been determined, though everything bearing on the subject has been investigated as far as possible.
>
> All the water is distilled; the public places, such as restaurants, saloons, soda fountains, etc., are using boiled water and proper care in washing the glasses. All troop messes are using only cooked vegetables, though earlier in the year some radishes and lettuce were eaten raw, and these, possibly, were a contributing cause. Their use has been stopped.

The surgeon at Fort William McKinley says:

> The old type of ice box, long in use in the Islands, was so unsatisfactory, that new refrigerators of suitable size and design were supplied to all organizations during the latter part of the year.

DISPOSAL OF WASTES.

At all except a few of the posts the system is the same as outlined in the last two reports of this office. At Fort Mills the surgeon states that:

> Owing to large number of temporary structures and incomplete sewer system the disposal of wastes is accomplished partly by rock pile incinerators, partly by dry earth closets, and partly by sewer. The work of the incinerators has proven very satisfactory with one exception.

An Imhoff tank, which has been built at Camp Stotsenburg, is reported to be working satisfactorily.

BARRACKS AND QUARTERS.

The new concrete barracks and quarters which have been built at a few posts are, on the whole, quite satisfactory. There are a few minor errors to be corrected.

CLOTHING.

The surgeon at Augur Barracks remarks:

Little complaint is heard as to clothing, aside from that already reported from numerous sources, viz, poor quality of issue clothing, heavy weight, shrinking, bad fit, etc., except as to constant use of leggins by enlisted men. In my opinion many skin lesions of the leg are due to the constant wearing of the leggins.

He seems to voice the sentiment of the entire Medical Corps on this question of the leggins.

ALASKA.

The mean enlisted strength of the troops serving in Alaska during the past year was 1,197 as compared with 1,119 in 1911. This force consisted of Infantry, Signal Corps, and Hospital Corps, all white. Alaska still maintains its position as being by far the healthiest region where the Army is stationed. The noneffective, admission, and discharge rates were all higher in 1912 than in 1911. The death rate was somewhat lower.

The noneffective rate was 16.24 per 1,000 in 1912 as compared with 13.15 in 1911. The rate for disease was 10.96 and for external causes, 5.28 per 1,000. The total rate in the United States was 27.15 per 1,000; that for disease being 22.57, and that for external causes 4.58 per 1,000. The diseases causing the highest noneffective rates were: Venereal diseases, 2.59 per 1,000; measles, 1.07; alcoholism, 0.57; mumps, 0.38, and tuberculosis (all), 0.38.

The admission rate for all causes was 511.28 per 1,000 in 1912 as compared with 418.23 in 1911. The rate for disease was 355.89 per 1,000, and that for external causes 155.39. The corresponding rates for the United States were for total causes 738.70 per 1,000, that for disease being 596.94, and that for external causes 141.76. The diseases having the highest admission rates were: Venereal diseases 41.77; alcoholism, 30.07; measles, 21.72, and bronchitis, 14.20 per 1,000. The rate for discharge on certificates of disability in 1912 was 5.01, and in 1911 4.47. All of the discharges in 1912 were for disease. The corresponding rate in the United States was 14.48 per 1,000, 13.19 being for disease, and 1.29 for external causes.

The death rate in 1912 was 5.85 per 1,000, and in 1911 it was 6.26. In actual number, 7 deaths occurred from disease and three from external causes.

Sixteen men were invalided home. Five were for tuberculosis. The other 11 were each for a separate cause.

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HAWAII.

Only one island of the Hawaiian group is garrisoned, namely, Oahu, on which is situated the city of Honolulu. The mean enlisted strength of the garrison during the year was 3,376 as compared with 2,014 in 1911. In spite of its salubrious and temperate climate and the absence of the more serious epidemic diseases, the noneffective, admission and discharge rates were higher than for the United States. The average number of days' treatment for each case was 13.08 days, as compared with 13.45 for the United States. The death rate was lower.

The constantly noneffective rate was 33.44 per 1,000 in 1912 as compared with 44.52 for 1911. The rate for disease was 26.57, and that for external causes, 6.88 per 1,000, as compared with 36.18 for disease and 8.34 for injuries in 1911. The diseases causing the highest noneffective rates were: Venereal disease 8.69, appendicitis 0.65, influenza 0.62, and diarrhea and enteritis 0.60.

The admission rate in 1912 was 936.32 per 1,000 as compared with 1,080.44 for 1911. The rate for disease in 1912 was 680.69 per 1,000 and for external causes 255.63. That for disease in 1911 was 808.84 and for external causes 271.60. Some of the principal diseases causing the highest admission rates were: Venereal disease 122.93 per 1,000, diarrhea and enteritis 44.14, influenza 38.51, and bronchitis 22.51. A little less than one-third of the total nonefficiency for diseases and a little less than one-fifth of the total number of admissions were caused by venereal diseases.

The rate for discharge for disability was 18.07 per 1,000, 16.29 being for disease and 1.78 for external causes. In 1911 the total rate was 13.90, that for disease being 13.41 and that for external causes being 0.50 per 1,000.

The death rate was 3.85 per 1,000 as compared with 2.98 in 1911. In actual numbers, 13 deaths occurred, 10 being due to external causes and 3 to disease. Three of the deaths from external causes were due to drowning and 3 to traumatisms by machines. Not more than 1 death occurred from any other one cause. In 1912 there were 78 enlisted men invalided home from the Hawaiian Islands. The diseases or conditions causing the highest number of men to be invalided home were: Mental alienation 12, venereal diseases 11, flat foot 7, tuberculosis 6, and enuresis 5.

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CHINA.

The mean enlisted strength of the troops, enlisted men, serving in China during 1912 was 1,097. This force consisted of Infantry, and detachments of Signal Corps, Hospital Corps, and noncommissioned staff, all white.

The noneffective rate was 26.01 per 1,000 for all causes, the rate for disease being 23.60, and that for external causes 2.41. The diseases causing the highest noneffective rates were venereal diseases 13.55 per 1,000, rheumatism, articular (all), 0.66, pneumonia (lobar) 0.57, and influenza 0.54.

The admission rate for all causes was 697.36, that for disease being 596.18 and that for external causes 101.19. The diseases causing the highest admission rates were venereal 203.28 per 1,000, influenza 42.84, diarrhea and enteritis 33.73, and alcoholism 22.79.

The discharge rate was 5.47 for all causes. The discharges were all for disease. The death rate was 7.29 per 1,000, the rate for disease being 3.65 and that for external causes being also 3.65.

PANAMA CANAL ZONE.

The mean enlisted strength of troops, enlisted men, serving in the Panama Canal Zone during the year 1912 was 773. This force consisted of Infantry and detachments of Hospital Corps and noncommissioned staff.

The noneffective rate was 27.74 for all causes, that for disease being 24.30 per 1,000 and for external causes 3.44. The diseases causing the highest noneffective rates were malarial fevers 5.60 per 1,000, venereal diseases 3.16, and tuberculosis (all) 0.90.

The admission rate for all causes was 796.90, that for disease being 641.66 and that for external causes being 155.24. The diseases causing the highest admission rates were malarial fevers 120.31 per 1,000, venereal diseases 68.56, influenza 37.52, and bronchitis 25.87. The rate for discharges on certificate of disability was 15.52, all of the discharges being for disease. The death rate was 9.06 per 1,000, that for disease being 1.29 and that for external causes 7.76. In all there were 7 deaths. Included in this number were 2 homicides and 2 deaths from drowning.

Twenty-five men were invalided home, seven being for flat feet and two each for tuberculosis, mental alienation, and organic disease of the heart, chronic bronchitis, and enuresis. The others were for separate causes.

PORTO RICO.

There are in Porto Rico two military posts—San Juan at the capital, and Henry Barracks in the interior—both garrisoned by the Porto Rican Regiment. The mean enlisted strength for 1912 was 588. The enlisted strength of this regiment is recruited from native Porto Ricans, the officers being in part Americans and in part Porto Ricans.

TABLE No. 45.—*Movement of sick in Porto Rico, years 1912 and 1911—Native troops.*

	Years.	From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.	
		Total.	In hospital.	Total.	In hospital.
Ratios per 1,000 of mean strength:					
Admissions to sick report	1912	1,142.86	977.89	921.77	.....
	1911	1,050.00	987.93	770.69	.....
Discharges on certificate of disability	1912	6.80	.....	5.10	.....
	1911	8.62	.....	6.90	.....
Deaths	1912	3.40	.....	.....	.....
	1911	6.90	.....	3.45	.....
Total losses	1912	10.20	.....	5.10	.....
	1911	15.52	.....	10.35	.....
Noneffective	1912	17.47	15.94	10.15	8.99
	1911	29.78	28.55	16.58	15.90
Average number of days lost:					
For each soldier	1912	10.28	9.37	5.97	5.28
	1911	10.87	10.42	6.05	5.80
For each case	1912	8.99	9.59	6.47	.....
	1911	10.35	10.55	7.85	.....

The noneffective rate was much lower in 1912 than in 1911, it being 17.47 per 1,000 in 1912, as compared with 29.78 in 1911. The rate for disease in 1912 was 16.32, and for external causes 1.15. In 1911 the corresponding rates were 28.15 and 1.63. Some of the principal diseases, with noneffective rates, were as follows:

	1911	1912
Venereal diseases	11.47	5.96
Intestinal parasites	2.03	.75
Malarial fevers	1.97	.50
Diarrhea and enteritis	.18	.77
Dysenteries	.44	.64

It is thus apparent that the greatest improvement, and the one accounting for the most of the improvement in the general rate was in the rate for venereal diseases. Both the intestinal parasites and malarial fevers also showed a marked improvement.

The admission rate was higher in 1912 than in 1911, being 1,142.86 per 1,000, as compared with 1,050.00 for 1911. The rate for disease was 1,037.41 per 1,000, and that for external causes 105.44 in 1912, and in 1911 the rate for disease was 968.97 and for external causes 81.03. In June, when the bubonic plague was reported in San Juan, upon the recommendation of the post surgeon, daily examinations were made of all the enlisted men in the post for several weeks. This resulted in 74 men being admitted to the hospital for several days observation in June, 10 in July, and 5 in August. In Table No. 76 seventy-seven of these cases are tabulated as under observation, and 12 as hypertrophied inguinal glands. If these 89 cases are deducted from the admission rate for disease, as they should be, this rate would be reduced by 151.36 per 1,000, making it 886.05, or lower than the corresponding rate in 1911. The total rate would then be 991.50 per 1,000, as compared with 1,050.00 for 1911.

The following list shows the principal diseases, with rates for 1911 and 1912:

	1911	1912
Venereal diseases	191.38	105.44
Malarial fevers	131.03	52.72
Dysenteries	18.97	34.01
Diarrhea and enteritis	12.07	112.24
Rheumatism, articular (all)	3.45	11.90
Febricula and undetermined fevers	1.72	13.61

It will thus be seen that the rate for venereal diseases showed a very marked improvement. The improvement in the rate for malarial fevers was also marked.

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The rate for discharge for disability was 6.80 per 1,000, all cases being for disease. In 1911 the rate was 8.62 per 1,000, that for disease being 6.90 per 1,000, and for external causes 1.72. The death rate was 3.40 per 1,000. The actual number of deaths were 2. Both were due to external causes, traumatic in character. In 1911 there were 2 deaths caused by disease and 2 by external causes.

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GENERAL HOSPITALS.

LETTERMAN GENERAL HOSPITAL, SAN FRANCISCO, CAL.

This hospital is used as a base hospital for the Philippines and Hawaii; a post hospital for the Presidio, San Francisco, Fort Winfield Scott, and several smaller posts in the harbor of San Francisco, and a general hospital for the western part of the country. It is the largest general hospital in the Army.

During the year a new officers' ward, isolation ward, and kitchen were completed and occupied. The remodeling of all the toilet rooms and diet kitchen has been completed. The roads, walks, and grounds have been improved. The commanding officer states that plans have been drawn and approved for a hydrotherapeutic building, a nurses' dormitory, and an addition to the detention ward, all of reinforced concrete construction. He recommends that no further construction of wood be done, but that the older wooden buildings be gradually replaced by reinforced concrete.

Excellent professional work has been done in all departments, and the field of usefulness of the hospital has been materially extended during the year. Only one case of typhoid fever was treated during the year, a recently discharged soldier from Alaska, who had not received the typhoid prophylactic. The work of the disability board, while requiring a great deal of time and care, has been a decided advantage.

The number of patients admitted during the year, including civilians and general prisoners, was 3,017, this being an increase of 45 over the preceding year. There were 231 cases remaining in hospital December 31, 1911, making a grand total of 3,248 patients treated in this hospital during the year. Some of these patients were treated for more than one cause, and in the hospital tabulation more than one case was counted for such patients. The total cases treated were 3,435. Of this number of cases 106 were officers, 2,709 enlisted men, 599 civilians, and 21 general prisoners. There were 1,600 medical cases, 1,155 surgical, 533 venereal, and 147 mental. The daily average number of patients was 255.5. Of this number 11.1 were officers, 215.3 enlisted men, 27.4 civilians, and 1.6 general prisoners.

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There were 60 deaths during the year, the causes being as follows:

Diseases of the nervous system	3
Diseases of the circulatory system	7
Diseases of the respiratory system	5
Diseases of the digestive system	7
Tuberculosis	9
Nephritis	4
Carcinoma	8
Marasmus	1
Suicides	4
Poisoning and trauma	5
Died, not on sick report	7
	60

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An active surgical clinic is maintained at this hospital, the following being a condensed tabular statement of the surgical operations:

Operations.	Officers.	Enlisted men.	Total.	Retired officers.	Retired enlisted.	Accepted recruits.	General prisoners.	Civilians.	Grand total.
Cranium	0	1	1	0	0	0	0	1	2
Eye	1	5	6	0	0	0	0	2	8
Ear	1	1	2	0	0	0	0	0	2
Nose	1	10	11	0	0	0	0	31	42
Throat	2	35	37	0	1	0	0	47	85
Face	1	6	7	0	0	0	0	4	11
Neck	4	8	12	1	0	0	0	0	13
Upper extremity	0	17	17	0	3	0	0	4	24
Thorax	0	5	5	0	0	0	0	3	8
Abdomen (laparotomy)	14	115	129	4	1	1	0	75	210
Gynecological:									
External								106	106
Internal								79	79
Lower extremity	7	59	66	0	0	0	1	23	90
Major (not included)	1	10	11	1	0	0	0	9	21
Minor (not included)	2	92	94	1	3	0	0	18	116
Total	34	364	398	7	8	1	1	402	817

Included in this list are 139 operations for appendicitis, 48 for hernia, 28 for hemorrhoids, and 61 for endometritis. In the gynecological department 51 women were delivered at term, and there was one stillbirth. There were 15 incomplete abortions rendered complete.

Of the operations performed, one was reported as partially successful, four as failures, and three were followed by death. The cases in which deaths occurred were gunshot wounds of the neck, hypertrophied prostate, and intestinal obstruction, with gangrene.

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WALTER REED GENERAL HOSPITAL.

This is the general hospital at Washington, D. C., and also serves as post hospital for Washington Barracks, D. C., an auto ambulance conveying the patients from the post at sick call and answering emergency calls. Since the last annual report, a kitchen and mess room for the hospital proper has been completed and an addition has been made to the nurses' quarters, which will now accommodate 24 nurses in a suitable way. Work is being pushed on the isolation hospital, which will be completed in a short time. When the barrack building was vacated by Field Hospital No. 3, October 21, 1912, it was immediately occupied by the Hospital Corps detachment on duty at this hospital. This building is a substantial and well-built structure and very suitable for its purpose. A part of the basement has been altered for the purpose of establishing a post exchange. This gives the men the benefit of this much needed institution. The quartermaster has a seeding and planting program whereby the appearance of the grounds will be improved from year to year as funds become available. There are only two sets of officers' quarters. The commanding officer is of the opinion that the Government would be far better and more economically served by building quarters for all officers on duty there.

The number of cases admitted during the year, including retired officers, retired and discharged enlisted men, and civilians, was 687,

this being an increase of 122 over the preceding year. Of this number, 104 were officers, 411 enlisted men, 19 retired officers, 23 retired and discharged enlisted men, 120 civilians, 2 general prisoners, and 8 members of the Army Nurse Corps. Three hundred and ninety of these cases were medical and 297 surgical. There were 52 cases remaining on sick report December 31, 1911, making a total of 739 treated during the year. The daily average number of patients was as follows: Officers, 12.34; enlisted men, 35.54; retired officers, 0.863; retired and discharged soldiers, 1.65; Army Nurse Corps, 0.30; civilians, 5.615; and general prisoners, 0.05. Total, 56.358.

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There were 18 deaths. Of this number, 3 were officers, 8 enlisted men, 2 retired officers, 2 retired soldiers, and 3 civilians. The following were the causes of the deaths:

Cerebral concussion	1	Chronic nephritis	2
Typhoid fever	1	Sarcoma	1
Sprue	1	Chronic amoebic dysentery	1
Pyemic liver abscess	1	Apoplexy	1
Appendicitis	1	Atrophic cirrhosis	1
Fracture cervical vertebra	1	Chronic interstitial pneumonia	1
Pernicious anemia	2	Fracture, left hip	1
Mitral insufficiency	2		

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An active surgical clinic is maintained at this hospital. The following is a statement of surgical conditions for which operations were performed.

Hernia	25	Diseases of the ear	1
Appendicitis	43	Diseases of the nose	24
Carcinoma, general, abdominal	1	Diseases of the throat and pharynx	124
Cholecystitis	1	Diseases of the neck and thorax	3
Cholelithiasis	1	Other diseases of the genito-urinary system, not specified above	8
Intestinal obstruction	3	Diseases of the vascular system	1
Abscess left iliac fossa	1	Diseases of the skin and cellular tissue not specified above	8
Duodenal ulcer	1	Disease of bones	6
Exploratory laparatomy	1	Diseases of joint, not specified above	4
Hemorrhoids	10	Other diseases, general	5
Fistula in ano	3	Gynecological:	
Epithelioma of scalp	2	Retroversion of uterus	6
Phimosis	10	Cystic ovary	4
Varicocele	5	Lacerated perineum	5
Adenitis	12	Endometritis	9
Fibrous ankylosis joint	11	Carcinoma	1
Bad result fractures	4	Other gynecological	6
Amputations	5		
Diseases of the eye	3		

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GENERAL HOSPITAL, FORT BAYARD, N. MEX.

This hospital is for the treatment of cases of pulmonary tuberculosis in the Army. Fort Bayard is situated in the southwestern part of New Mexico, the reservation originally extended about 4 miles north and south and 3 miles east and west and had an area of approximately 13½ square miles. Several years ago it was enlarged by the purchase of land to the north and by the addition, through Executive order, of various tracts of public land, the object of the enlargement being the more perfect protection of the watershed and the acquisition of additional water. On the north the land rises rapidly,

reaching the height of 9,000 feet at Black Peak, about 8 miles from the post. In this direction the surface is broken by rocky hills covered with piñon, juniper, and western yellow-pine trees. The country is picturesque, and fine views are to be had from the hills. To the south the valleys widen into vast treeless plains. The feature which constitutes the peculiar excellence of the climate of Fort Bayard and distinguishes it from other parts of the Rocky Mountain Plateau is its relative equability. The climate is such that outdoor life is pleasant throughout the year. Two factors contribute to secure this result—the altitude and the geographical position. The altitude, 6,165 feet, prevents excessive heat; the hot plains of a lower elevation which surround on all sides the mountainous region in which Fort Bayard is situated temper the cold winds of winter and prevent excessive cold.

No new buildings were constructed during the year. A silo at the dairy was erected at the expense of the hospital fund. An additional well was dug and provided with an electrically operated pump. A small concrete dam was constructed upon Cameron Creek at a point about half a mile below the post. The water thus collected has been brought upon the lands below the dam, thus rendering possible the irrigation of about 10 acres of excellent land hitherto unavailable for profitable cultivation.

The commanding officer states that the increased number of beneficiaries of the Soldiers' Home under treatment at this hospital has resulted in overcrowding the wards for ambulant patients, so that it has been necessary to quarter some of the patients in the old wooden barrack known as ward 5, which is quite unsuited for the purpose. The number admitted during the year, including beneficiaries of the Soldiers' Home, civilians, and general prisoners, was 686, this being an increase of 62 over the preceding year. There were 242 patients remaining December 31, 1912, making a total of 928 cases treated during the year. Of this number 29 were officers, 361 enlisted men, 463 beneficiaries of the Soldiers' Home, and 75 civilians. Of the number treated, 888 were medical cases and 40 were surgical. The daily average of officers was 12.63, enlisted men, 79.61; beneficiaries of the Soldiers' Home, 139.95; civilians, 13.79; total, 245.97.

* * * * * * *

Fifty-four deaths occurred during the year. Of this number, 2 were officers, 21 enlisted men, 24 beneficiaries of the Soldiers' Home, and 7 civilians. Chronic pulmonary tuberculosis caused 42 deaths, tubercular meningitis 2, lobar pneumonia 2, acute pneumonic tuberculosis 1, several other diseases 1 each.

* * * * * * *

Forty-nine surgical operations were performed during the year, of which number 48 were successful and 1 was a failure. There were no deaths following operations.

The following is a condensed statement:

Genito-urinary	8	Skin and cellular tissues	14
Anus and rectum	6	Mouth and pharynx	2
Abdomen	11	Others	6
Thorax	2		

* * * * * * *

The following table shows the result of treatment in all cases of pulmonary tuberculosis:

Class.	Number.	Apparently cured.		Arrested.		Improved.		Unimproved.		Died.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Incipient	46	10	21.74	13	28.26	14	30.43	9	19.57	.....	.....
Moderately advanced	288	18	6.25	49	17.01	168	58.33	50	17.36	3	1.05
Far advanced	337	4	1.19	15	4.45	170	50.45	101	29.95	47	13.96
Acute miliary	1	.....	.....	.....	.....	.....	.....	.....	.....	1	100.00
Total	[1] 672	32	4.78	77	11.40	352	52.38	160	23.80	51	7.64

[1] Includes 83 cases under treatment one month or less. Does not include 3 cases under treatment less than one week.

The result of treatment in completed cases of pulmonary tuberculosis was as follows:

Class.	Number.	Apparently cured.		Arrested.		Improved.		Unimproved.		Died.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Incipient	27	10	37.04	7	25.92	8	29.63	2	7.41	.....	.....
Moderately advanced	164	10	6.10	14	8.54	111	67.68	26	15.85	3	1.83
Far advanced	202	2	.99	3	1.49	94	46.53	56	27.72	47	23.27
Acute miliary	1	.....	.....	.....	.....	.....	.....	.....	.....	1	100.00
Total	[1] 394	22	5.58	24	6.09	213	54.06	84	21.32	51	12.95

[1] Includes 47 cases under treatment one month or less and 4 fatal cases under treatment one week or less.

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ARMY AND NAVY GENERAL HOSPITAL, HOT SPRINGS, ARK.

This hospital is intended especially for patients having diseases in which hydrotherapeutic treatment is indicated. Paragraph 1463, Army Regulations, 1910, states that—

> The Army and Navy General Hospital, Hot Springs, Ark., is under the direction of the Secretary of War, and is devoted to the treatment of the officers and enlisted men of the military and naval service of the United States, cadets at the United States Military and Naval Academies, officers of the Revenue-Cutter Service, officers of the Public Health and Marine-Hospital Service, and honorably discharged soldiers and sailors of the Regular and Volunteer Army and Navy of the United States, for such diseases as the waters of the hot springs of Arkansas have an established reputation in benefiting.

Some improvements and additions were made during the year. A new diet kitchen was provided; the old ice plant was replaced by a new 12-ton refrigeration system having a capacity of not less than 5 tons of ice daily; the heating system has been improved; several additions have been made to the laundry equipment; and a new room has been furnished and equipped in the basement of the administration building for use as an X-ray treatment room, with an adjoining dark room. The commanding officer states that steps have been taken to secure bids for the construction of a new nurses' home. He

states that the additions most urgently needed are, in the order of their immediate importance, an officers' ward, quarters for noncommissioned officers, barracks for Hospital Corps. Next to these the greatest need is for an addition to and renovation of the bathhouse. During the year, 815 cases were admitted, this being an increase of 69 over the preceding year. Of this number 34 were officers, 104 enlisted men, 38 retired officers, 87 retired enlisted men, and 552 civilians, chiefly veterans of the Civil War, admitted in accordance with the law. The daily average was 99.5. The following tables show the principal causes of admission and method of disposition of all cases:

Remaining in hospital Dec. 31, 1911	115
Admissions:	
Diseases of the respiratory system	14
Diseases of the heart	19
Diseases of the urinary system	40
Rheumatism, articular	121
Rheumatism, muscular	35
Gastritis	12
Hernia, inguinal	6
Diseases of the kidneys	34
Arthritis	38
Syphilis and results	47
Gonorrhea and results	9
Diseases of the circulatory system	140
Malarial affections	8
Injuries	25
All other causes	267
Total	930
Dispositions:	
Returned to duty	100
Died	18
Discharged on surgeon's certificate of disability	36
Transferred	4
Discharged from hospital (civilians)	661
Otherwise disposed of	9
Remaining Dec. 31, 1912	102
Total	930

There were 18 deaths during the year; of this number 1 was an officer, 3 were enlisted men, and 14 were civilians. The following table shows the causes of deaths:

Chronic interstitial nephritis	2
Chronic parenchymatous nephritis	2
Diarrhea, chronic	1
Mitral regurgitation	2
Aortic obstruction and mitral regurgitation	1
Mitral insufficiency	1
Asthenia	1
Paralysis agitans, complicated by diarrhea	1
Carcinoma, pylorus and liver	1
Crushing injury to chest	1
Myelitis, chronic	1
Pyonephrosis and secondary pneumonia	1
Septicemia and lobar pneumonia	1
Pneumonia	1
Carcinoma of colon	1
Total	18

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DIVISION HOSPITAL, MANILA, P. I.

The name of the general hospital at Manila, which has been heretofore the Division Hospital, was changed to "Department hospital" by C. A. R. 26, 1913.

This hospital is the general hospital for the Philippine Islands. It differs from the general hospitals in this country in that it is not directly under the control of the Surgeon General, but owing to its geographic location it is under the authority of the division commander. Several improvements and additions to this hospital, mentioned in the last annual report as very necessary, were made during the year.

1. A second story was built over a portion of the quarters of the Hospital Corps detachment for the occupancy and use of the board for the study of tropical diseases. The work was completed about August 31, 1912. The rooms vacated by the tropical board were equipped with new cabinets, shelves, tables, etc., for use of the general laboratory of the hospital.

2. The commanding officer reported that the building of a maternity ward over a portion of the officers and women's ward was to be completed about March 1, 1913. This ward gives ample accommodations for the care of maternity cases. There are eight rooms for patients. A porch for convalescents is one of the features of this new ward.

There have been a number of minor repairs and improvements. Several buildings have been painted both inside and out. The commanding officer reported on January 1 that when all the work in progress was completed he believed that the hospital would be in better general repair than it has ever been since its occupancy as a military hospital by the Army of the United States.

In regard to new construction the commanding officer is of the opinion that it would be economy in the end to build a new concrete hospital, on the pavilion plan, on the present site, provided the American occupancy is to continue. At the present time an intercommunicating telephone system is needed to facilitate administration, and an automobile ambulance is requested by the commanding officer. There is also some additional repair work necessary.

The total number admitted to this hospital during the year, including civilians entitled to medical treatment, was 2,641.

Admissions, 1912.

	Medical.	Surgical.	Total.
Officers	96	53	149
Enlisted men (American)	1,057	565	1,622
Philippine Scouts	91	46	137
Civilians	405	328	733
Total	1,649	992	2,641

In addition to this number there were 107 patients remaining under treatment December 31, 1911, making a total of 2,748 treated. This was an increase of 229 over the preceding year.

The daily average was:

Officers	7.01
Enlisted men (American)	81.50
Philippine Scouts	13.22
Civilians	20.08
Total	121.81

* * * * * * *

There was only one case of typhoid fever treated during the year. This case was an unvaccinated scout, who died. Not a case of beriberi (military) was treated here during the year. Twenty-three deaths occurred as compared with 15 in 1911. The following table shows these deaths with causes:

Cause.	Officers.	Enlisted men.	Scouts.	Civilians.
Burns:				
Toxemia following				1
Shock following				1
Cancer of liver			1	
Cardiac dilatation				1
Colitis, acute catarrhal				1
Delirium tremens, alcoholic		1		
Hemorrhage:				
Intestinal				1
Gastric		1		
Cerebral				1
Injuries (fracture of skull)		1		
Malarial fever		1		
Nephritis, chronic		1		
Œdema of brain, alcoholic		1		
Peritonitis:				
Typhoid fever		1		
Appendicitis		1		
Pneumonia:				
Lobar				1
Broncho				1
Poisoning:				
Bichloride of mercury				
Phenol, accidental				1
Tetanus				2
Valvular heart disease				1
Injuries, shock following		1		
Total	0	9	1	13
Aggregate, all classes				23

American soldiers are not discharged for disability in the Philippine Islands, except in very rare cases, and there were none discharged there in 1912. All the native enlisted men physically disabled for service, are discharged in the islands. The following table shows the number discharged at this hospital during the year with causes:

Carcinoma, cervical, bilateral	1
Defective teeth	1
Eye trouble:	
Retino-choroiditis, bilateral	1
Leukoma, right eye	1
Fistula in ano	1
Gonorrheal cystitis	1
Gonorrheal arthritis	1
Hysteria, major	1
Insanity, all classes	4
Loss of left leg	1
Mental constitutional inferiority	1
Neurasthenia	1
Rheumatism, muscular	1
Synovitis, chronic, right knee	1
Tuberculosis, pulmonary	22
Tuberculosis of cervical glands	1
Wounded in action:	
Loss of left arm	3
Loss of left hand	1
Painful scar	1
Total	45

In 1911 there were 26 discharges for disability at this hospital.

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MEDICAL DEPARTMENT.

The Medical Department consists of the Medical Corps, the Medical Reserve Corps, the Dental Corps, the Army Nurse Corps, and the Hospital Corps.

The following statement shows the strength of the personnel, commissioned, enlisted, and employed, by contract or otherwise, of the Medical Department on June 30, 1913:

Medical officers	424
Medical reserve officers, active duty	105
Contract surgeons	9
Dental surgeons, commissioned	28
Acting dental surgeons, under contract	23
Army Nurse Corps	125
Hospital Corps	3,419
Civil employees	236
Total medical personnel	4,369

MEDICAL CORPS.

The Medical Corps is composed of the commissioned medical officers of the Regular Army.

Authorized strength June 30, 1913	445
In service June 30, 1912	414
Appointed during the year	22
Total	436
Losses during the year	12
In service June 30, 1913	424

On October 1, 1912, 26 candidates who had passed the preliminary examination for appointment in the Medical Corps reported at Washington to take the course of instruction at the Army Medical School. Twenty-four successfully completed the course of instruction at the school and were graduated May 31, 1913; 22 of the graduates were recommended for appointment in the Medical Corps of the Army. One student officer, owing to illness, was prevented from taking the full course at the school and was not graduated and given a commission, but was retained under his commission in the Medical Reserve Corps and will again be ordered to the school as a member of the next class for the purpose of completing the course.

Losses during the fiscal year.

	Colonels.	Lieutenant colonels.	Majors.	Captains.	First lieutenants.	Total.
Retired	4	.....	1	1	1	7
Resigned	.....	.....	.....	1	2	3
Discharged	.....	.....	.....	.....	1	1
Died	.....	.....	.....	1	.....	1
Aggregate	4	.....	1	3	4	12

The death was Capt. Clarence A. Treuholtz, April 15, 1913.

PROMOTIONS DURING THE FISCAL YEAR.

The following promotions were made: Four lieutenant colonels to be colonels; 4 majors to be lieutenant colonels; 5 captains to be majors; 45 lieutenants to be captains.

The department has continued to hold preliminary examinations for appointment in the corps the second Monday in each month at San Francisco, Fort Sheridan, and Washington, D. C. During the fiscal year 24 applicants passed the preliminary examinations. Of this number 15 attended the session of the Army Medical School, which ended May 31, 1913, leaving 9 who will attend the next session of the school. A preliminary examination will be held on July 14, 1913, at various Army posts throughout the United States, to which 53 applicants have been invited.

Owing to the fact of the small number of vacancies now existing in the Medical Corps monthly examinations will no longer be held. It is proposed to convene boards at various posts throughout the United States in January and July. Candidates will be authorized to present themselves for examination at the points nearest their respective places of residence.

MEDICAL RESERVE CORPS.

On roster June 30, 1912		1,105
Appointed during the year		153
		1,258
Losses during the year:		
Resigned	21	
Discharged	5	
Died	4	
Commissions vacated by appointment to regular corps	23	
		53
On roster June 30, 1913		1,205

Of the 1,205 on roster June 30, 1913, 105 were on active duty and 1,100 on the inactive list.

On active list June 30, 1912		115
Ordered to active duty during the year		62
		177
Relieved from active duty	41	
Commissions vacated	23	
Honorably discharged	1	
Resigned	7	
		72
On active duty June 30, 1913		105

An officer of the Medical Reserve Corps residing in the vicinity of each military post has been designated as a locum tenens, and the policy has been adopted of calling such officer into active service for duty at his post when all the regular medical officers thereat are called upon to accompany troops into the field. When the Second Division was mobilized in February, 1913, the medical officers were thus enabled to promptly leave the posts with the troops, their places being filled in the manner indicated.

The medical service of the encampment of the veterans of the Union and Confederate Armies at Gettysburg devolved upon the Army, and it was necessary to supplement the regular Medical Corps to provide for the large number of men assembled at that camp. This was done by ordering 23 officers of the Medical Reserve Corps to active duty for a period of a few days, and having them report to the chief surgeon of the Gettysburg encampment on the 28th of June, which arrangement proved to be very satisfactory. It not infrequently happens that the services of a medical officer are required for a short period in an emergency when an officer of the regular corps is not available, and the emergency can be satisfactorily met by the temporary employment of an officer of the Reserve Corps. Should an emergency arise demanding a considerable number of medical officers in excess of those that could be furnished by the regular establishment, it is believed that the organized Reserve Corps would be a most valuable agency in providing the men without delay.

Great care has been exercised in the selection of the personnel of this organization, and many men of distinction in the medical profession are borne upon its rolls. Since few opportunities have thus far been afforded officers of the Medical Reserve Corps on the inactive list for duty with troops, they are consequently not as familiar as could be desired with the practical details of the specialties of military medicine. They are, however, coming more and more closely in touch with the officers of the regular Medical Corps by personal contact, by correspondence, and through medico-military publications, and in their enthusiasm are acquiring considerable theoretical knowledge along those lines. This makes it certain that when called into active service they would become efficient medical officers much more promptly than would a like number of men selected at random from the civilian medical profession.

It is obvious that a greater opportunity for the acquiring of practical knowledge by service with troops would still further enhance the value of this organization. This could be done to a certain extent by placing a limited number of men on duty for short periods at maneuver camps and camps of instruction. It could be done much more thoroughly by having a considerable number of them serve with the troops for a period of two years. To carry out this idea it is the policy of this office to have relieved from active service as rapidly as it can be done the older officers of the Reserve Corps who have acquired experience with troops, and to replace them by others from the inactive list, these in turn being replaced by others for a period of two years of active service.

CONTRACT SURGEONS.

In service June 30, 1912	11
Contracts made during the year	9
Total	20
Contracts annulled during the year	11
Contracts in force June 30, 1913	9

These contract surgeons are on duty at arsenals, remount depots, etc., at the rates of pay ranging from $75 to $150 per month.

DENTAL CORPS.

Number of dental surgeons in service June 30, 1912	28
Acting dental surgeons in service June 30, 1912	10
Appointed during the year	13
Total	51

The act of March 3, 1911, reorganizing the Dental Corps of the Army and providing for dental surgeons and acting dental surgeons on the basis of 1 per 1,000 with troops, created many vacancies in the Dental Corps, some of which have already been filled, but many still remain. Examinations are held twice yearly at various posts throughout the United States where duly qualified dentists are authorized to present themselves for examinations. Successful candidates are immediately given contracts and assigned to duty at military stations with the status of acting dental surgeons. Acting dental surgeons who serve satisfactorily for a period of three years are eligible for appointment as dental surgeons, and after passing a satisfactory examination will be commissioned with the rank of first lieutenants in the Dental Corps. Inasmuch as the full probationary period has not elapsed since the reorganization of the corps, no promotions have been made under the new scheme.

ARMY NURSE CORPS.

During the period covered by this report the authorized strength of the Army Nurse Corps has been 125. The corps has been kept filled to this limit and these figures represent the actual strength on the last day of the fiscal year 1913.

An increase of 25 nurses has been authorized, effective July 1, 1913, and it is believed that the vacancies thus created can be quite promptly filled from among the approved candidates who have applications on file.

The increase in the number of nurses available for assignment will enable this office to comply with the demand for additional nurses at stations which are now inadequately provided, and will provide for a slight extension of the service to other points. Thus far it has been impossible to station members of the Army Nurse Corps at any of the brigade posts where their services could be used with advantage.

If satisfactory accommodations can be obtained at Fort Leavenworth, it is proposed to send a small detachment to that post for duty.

During the year nurses have been on duty in the United States at the Walter Reed General Hospital, Takoma Park, D. C,; Army and Navy General Hospital, Hot Springs, Ark.; Army General Hospital, Fort Bayard, N. Mex.; the Letterman General Hospital, San Francisco, Cal., and the attending surgeon's office, Washington, D. C.; in the Hawaiian Department at the department hospital, Fort Shafter, Honolulu, and in the Philippines Department at the department hospital, Manila; Fort William McKinley, Rizal, and Pettit Barracks, Zamboanga.

During the fiscal year there have been made 36 new appointments and 8 reappointments; 39 nurses have been discharged. During the same time 549 applications have been received from graduated nurses for admission to the Army Nurse Corps.

Since the date of the last report the enlargement of the nurses' quarters at the Walter Reed General Hospital has been completed. Contracts have been made for the construction of the new quarters at the Letterman General Hospital, San Francisco, Cal., and the Army and Navy General Hospital, Hot Springs, Ark.

The enrolled nurses of the American Red Cross Nursing Service approaching 4,000 in number now constitute the reserve of the Army Nurse Corps, and in time of war or other emergency are with their own consent eligible for assignment to active duty in the military establishment.

HOSPITAL CORPS.

The authorized strength of the Hospital Corps is as follows:

Sergeants, first-class	300
Sergeants	362
Corporals	50
Privates, first-class, and privates	2,800
Total	3,512

The number of sergeants, first-class, is fixed by law, the total strength of the Hospital Corps and the number in the various other grades is determined by Executive order.

Strength at date of last report, June 30, 1912:	
Sergeants, first-class	262
Sergeants	341
Corporals	39
Acting cooks	200
Privates, first-class, and privates	2,654
Total	3,496
Gain July 1, 1912, to June 30, 1913:	
By enlistment and reenlistment	544
By transfer from the line, including unassigned recruits from depots	857
By return from desertion	93
Total	1,494
Loss during same period:	
By discharge, expiration of term of service	870
By discharge, by order	253
By discharge, certificate of disability	57
By discharge, sentence, general court martial	106
Transfer to the line	39
By retirement	21
By death due to disease	9
By death due to drowning, wounds, and other accidental causes	5
By desertion	210
Killed by guard	1
Total	1,571
Leaving in service June 30, 1913:	
Sergeants, first-class	295
Sergeants	336
Corporals	38
Acting cooks	190
Privates, first-class, and privates	2,560
Total	3,419

It will be observed that the Hospital Corps is over 2½ per cent below its authorized strength. It has been found impossible to keep this corps at its normal strength by enlistments, or by voluntary transfer from the line. On four occasions during the year requests have been made to The Adjutant General for the transfer of unassigned recruits from the various depots to fill vacancies, and these requests have been complied with in so far as practicable. About 225 men have been transferred to the corps as a result of this policy. It has not resulted, however, in obtaining the most desirable class of men for service with the sick.

The inspector general, Southern Department, in report dated June 4, 1913, remarks:

> The men transferred to the Hospital Corps from the line are reported to be an inferior grade of men not wanted in the line. A way to avoid this situation is to "enlist directly for the Hospital Corps."

The impracticability of obtaining men as proposed by the inspector general, Southern Department, has been shown above.

Commenting on the remarks of the inspector general, the commanding general of the Southern Department says:

> If the pay of the Hospital Corps is sufficient to attract desirable men, transfer from the line is believed to be the best method of obtaining suitable men.

The fact that the pay is not sufficient to attract the best class of men is shown elsewhere in this report.

Examinations were held in the departments and at independent stations during the year for promotion to the grade of sergeant, and 137 were advanced to this grade. Of this number 15 had served in the same grade. At present there is a shortage in this grade of noncommissioned officers, and it has been necessary to instruct the department surgeons to hold special examinations to secure eligibles for promotion.

On June 18, 1913, the Secretary of War authorized 12 additional sergeants for duty with the Organized Militia, the strength of the Hospital Corps being increased to that extent. The names of 8 of these noncommissioned officers have been submitted for these assignments. The 4 still required for this duty will be designated as soon as men become available as a result of the examination now being held.

The Eastern Department was called upon to send Hospital Corps personnel to Gettysburg, Pa., for duty at camp of Civil War veterans at that place. It was also necessary to send Field Hospital No. 1, Fort D. A. Russell, Wyo., to this camp for duty.

The Eastern Department was also called upon to furnish personnel for duty in the Ohio Valley and Vicksburg flood districts during the disastrous floods of March, 1913.

When the Second Division was concentrated in Texas in February, 1913, a considerable proportion of the Hospital Corps personnel of the Central Department accompanied the line organizations from the various posts to the point of concentration, and have since remained on duty with the division. Field Hospital No. 3 and Ambulance Company No. 3 also accompanied the division. The Medical Department personnel for the transports assembled at Galveston was furnished from the Eastern Department.

The authorized strength of the Hospital Corps (3,512) is inadequate for the needs of the service, and does not provide the number of men prescribed by Army Regulations for duty with the Army as now constituted. When the allowance of 3,500 men was fixed for the Hospital Corps, the strength of the Army was less than 76,000. Its present authorized strength, exclusive of Hospital Corps and Philippine Scouts, is about 84,810, and a corresponding increase in the Hospital Corps would bring that organization up to 3,905.

It has been assumed that when the troops of a garrisoned station take the field, the entire Hospital Corps detachment at the post is immediately available to accompany it; such is not the case, as there invariably remain behind not only the enlisted sick, but the families of officers and enlisted men in numbers sufficient to demand that a working hospital be maintained.

As previously stated in this report, it has been impossible to keep the Hospital Corps filled up to its authorized strength by enlistment and reenlistment, and there has been a constant drain upon it by the transfer of desirable men to the line and to other staff corps. This is interpreted to mean that the relative desirability of service in the Hospital Corps has lessened since the organization of the corps.

In his annual report for the fiscal year 1911–12, the commanding general, Central Division, alludes to this condition of affairs in the following terms:

> The discipline and work of the Hospital Corps has been excellent. There has been some difficulty in keeping the detachments up to their authorized maximum strength, as the Hospital Corps does not offer sufficient inducements to make men desire to transfer to it from the line.

When the Hospital Corps was organized in 1887, it was recognized that its members would be required to do work that was not attractive to enlisted men and which required special qualifications. To secure a suitable class of men to do such work, noncommissioned officers of the Hospital Corps were given pay considerably in excess of most noncommissioned officers of the line. At a later date the pay of privates was likewise proportionately increased. This principle was lost sight of in the legislation of 1908, when the pay of the line soldier was increased. In the meantime special grades of noncommissioned officers have been made in other branches of the service and various ratings established whereby the opportunities for promotion of intelligent men have been increased and opportunities for a substantial increase of pay have been provided. Opportunities for extra-duty pay are provided in other branches of the service, but are denied to the Hospital Corps soldier.

Bills are now pending in Congress which provide the following grades and rates of pay for the Hospital Corps:

Sergeants major (new grade) 30, at $75 per month, with the increased pay for service as now authorized for sergeants, first class.

Sergeants, first class, 300, pay to be increased from $50 to $65 per month.

Sergeants, pay to be increased from $30 to $36 per month.

Corporals, $24 per month (no increase).

Privates, first class, pay to be increased from $18 to $21 per month.

Privates, $16 per month (no increase).

These bills were proposed and introduced without any prompting on the part of this office, but are in accordance with its ideas, and it

is believed that if the measure were given the support of the Secretary of War it would become a law.

Such a law would undoubtedly be for the benefit of the service by increasing the desirability of the Hospital Corps and attracting thereto a better class of men; and the additional higher grade contemplated would provide a more adequate compensation for a limited number of specially skilled men, such as pharmacists of exceptional ability, X-ray experts, anesthetists, and others of a class who can now command in civil life a higher rate of pay than is afforded them in the service.

In our service field hospitals and ambulance companies are an outgrowth of the Hospital Corps companies of instruction. In all modern armies such organizations form most important integers of the mobile army.

To date four field hospitals and ambulance companies have been organized for the entire United States Army—a number just sufficient to equip one Infantry division on the basis allowed by Field Service Regulations.

Geographically these organizations are located as follows:

In the Philippine Department, of each	1
In the Western Department, of each	1
In the Central Department, of each	2

Field Hospital No. 1, from the Central Department, is now on detached service at Gettysburg, in the Eastern Department, and Field Hospital No. 3 and Ambulance Company No. 3, from the same department, are with the Second Division at Texas City, Tex. It will thus be observed that there is neither a field hospital or ambulance company which belongs in the Eastern, Southern, or in the Hawaiian Departments. Recently, when it became necessary to provide two field hospitals for service at the veteran encampment at Gettysburg, the emergency had to be met by the transfer of Field Hospital No. 1 from Fort D. A. Russell, Wyo., and the organization of a second provisional hospital, de novo, from the Medical Department personnel of the Eastern Department. To get this in shape for service required about six weeks of time, even though its personnel was furnished by trained Hospital Corps men.

The tactical assignments of the four field hospitals and four ambulance companies are as follows: To the Second Division, one of each; to the Third Division, one of each; to the Cavalry Division, one of each; with troops in Philippine Islands, one of each.

It will thus be seen that the First Division has no field hospital or ambulance company attached to it or stationed within the limits of the territory which it occupies. When one of these organizations is needed for duty—as in the case of field hospitals for the Gettysburg encampment—the alternative is presented of organizing a provisional unit or of bringing one more than half way across the continent. In the instance under consideration it was necessary to doboth. In passing, it might be remarked that in consequence of the Second Division having only one field hospital and one ambulance company of its own, the organizations belonging to the Cavalry Division had been made subject to the orders of the commanding general of the mobilized divisions, whose authority was obtained before it could be used for service in the Eastern Department. In other words, in consequence of the deficient number of such organizations a field

hospital belonging to one division is on duty with a second and is subject to the orders of the commanding general of a third. In the event of war, the unpreparedness of the Medical Department in this direction would be a matter of very serious moment and would invite disaster. This office desires to call attention to this, and to go on record as having done so, in order that it may be absolved from responsibility in the event of any breakdown due to a deficiency in the number of these important organizations.

I recommend that steps be taken with the least practicable delay to organize and equip two field hospitals and two ambulance companies for each of the tactical divisions and for the Philippine Department, and one of each of the organizations for the Hawaiian Department, and that the authorized strength of the Hospital Corps be increased by the number of noncommissioned officers and privates necessary to man the proposed organizations. I further recommend that such a procedure be considered as a preliminary and emergency measure, and that eventually each tactical division be provided with mobile sanitary units on the basis prescribed by Field Service Regulations.

In consideration of the special functions of the mobile organizations, there is required for duty with them a certain number of men having qualifications different from those generally required for Hospital Corps soldiers. I therefore recommend that there be allowed for each ambulance company 1 horseshoer at $30 per month, and 1 farrier, 1 saddler, and 15 wagoners, each at $21 per month; and for each field hospital 1 artificer and 8 wagoners, each at $21 per month.

Proposed Veterinary Corps.

One or more bills have been introduced in Congress during the last year to increase the efficiency of the veterinary service of the Army. This office has recommended that this service be organized as a corps and attached to the Medical Department, in a manner similar to the Nurse Corps and Hospital Corps. This is not proposed for the aggrandizement of the Medical Department, but because it is believed to be the only way in which that service can be raised to a fitting plane of dignity and efficiency such as it has reached in European countries and in the armies of the great military nations.

Veterinary medicine is a learned profession with a voluminous periodical and permanent literature of its own. The therapeutics and pharmacy of veterinary medicine are largely the same as for the medical service, and in Europe, where veterinary medicine has the dignity and standing of a learned profession, it has made valuable contributions to our knowledge of the causation of diseases. It is believed that it can not be placed on a high standard of efficiency without long-continued application of the same agencies which have raised the Medical Corps of the Army to its present high standard. This would not only conduce to the elevation and efficiency of the veterinary service, but would also be in the interest of economy, as all its supplies could be most advantageously purchased, cared for, and issued through the machinery of the Medical Department.

ARMY MEDICAL SCHOOL.

[Commandant, Col. Charles Richard, Medical Corps, United States Army; secretary, Maj. Carl R. Darnall, Medical Corps, United States Army.]

Col. Louis A. La Garde, Medical Corps, United States Army, was relieved as instructor in military surgery July 3, 1912, and as commandant October 1, 1912, by Col. Charles Richard, Medical Corps, United States Army.

The seventeenth session of the school began October 1, 1912, and ended May 31, 1913. The number of accepted candidates appointed in the Medical Reserve Corps and admitted to the school was 26. No student-candidate failed to pass the mid-term examination; 24 completed the course and qualified in the final examination; of this number 22 were recommended for commission in the Medical Corps of the Army, and 2 failed to receive such recommendation because of deficiency in aptitude for the military service; 2 failed to pass the final examination.

No officers of the Organized Militia were given permission to attend the course during the session.

The course of instruction has varied but little from that of last year. The following table shows the subjects taught, the number of hours devoted to each, names of the instructors, and the value of the several subjects.

No.	Subject.	Hours of instruction.	Professor.	Maximum.	Minimum.
1	Medical Department administration, duties of medical officers, and customs of the service.	96	Maj. Chas. R. Reynolds	1,000	800
2	Clinical microscopy and bacteriology.	268	Maj. F. F. Russell; assistants, Capt. C. F. Craig, Capt. H. J. Nichols.	900	720
3	Military hygiene	21	Lieut. Col. F. A. Winter	800	640
4	Military surgery	24	Col. Charles Richard	800	640
5	Military and tropical medicine	18	Lieut. Col. W. D. McCaw	800	640
6	Sanitary chemistry	150	Maj. C. R. Darnall	600	480
7	Hospital Corps drill	48	Capt. W. A. Wickline	500	400
8	Operative surgery	17	Capt. A. C. Christie	400	320
9	Opthalmology and optometry	43	Maj. P. S. Halloran; assistant, Capt. Wm. T. Davis.	400	320
10	Radiography	26	Capt. A. C. Christie	300	240

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SPECIAL WORK OF MEDICAL OFFICERS.

FLOOD RELIEF WORK, 1913.

During the disastrous flood which occurred in the Ohio and Mississippi Valleys, beginning in March, 1913, Maj. P. C. Fauntleroy, Medical Corps, was directed by the Secretary of War to proceed to Columbus, Ohio, and take charge of the medical relief work in Ohio. In compliance with this order Maj. Fauntleroy proceeded to Columbus and reported to the governor of Ohio. Owing to the delay caused by the great destruction of railroads he did not reach Columbus until

March 30, having left Washington on March 26. The following medical officers were ordered to report to him for duty in connection with the relief work:

Maj. William T. Lyster.
Maj. Sandford H. Wadhams.
Maj. Paul C. Hutton.
Capt. George P. Peed.
Capt. John A. Clark.
Capt. John R. Bosley.
Capt. Arthur M. Whaley.
Capt. John S. Lambie.
Capt. Morrison C. Stayer.
First Lieut. Edward C. Register.

Ten noncommissioned officers and 40 privates of the Hospital Corps were also orderd to report to him at Columbus. Owing to the destruction of the railroads, only Maj. Wadhams and Capts. Clark and Bosley, and Lieut. Register, 2 noncommissioned officers, and 4 privates, Hospital Corps, were able to report to Maj. Fauntleroy at Columbus. The other officers and men reached Dayton and by order of the Secretary of War were put on duty with Maj. Rhoads, Medical Corps, as stated below. The following supplies were furnished Maj. Fauntleroy by the Medical Department for the relief work: Two field hospitals, reserve medical and surgical supplies sufficient for 20,000 men for one month, 10,000 vaccine points, sufficient antityphoid prophylactic to immunize 25,000 men, 10,000 units diphtheria antitoxin, and 60 cubic centimeters meningitis serum.

Upon arrival at Columbus, Maj. Fauntleroy was directed by the governor to confer with the authorities of the Ohio National Guard, and especially with Lieut. Col. Hall, surgeon general, Ohio National Guard. He also conferred with the city health officer and with the secretary of the State board of health. Much valuable information was obtained from these sources relative to prevailing epidemics, etc. Throughout his stay he continued to work in conjunction with the regularly constituted health authorities of the State. He reported:

From my conference with Lieut. Col. Hall I found that there was no reliable information as to the conditions in the valleys of the Miami, Scioto, Muskingum, and Ohio Rivers. Owing to the destruction of the means of communication the reports from the flooded districts were mere hearsay rumors, and consequently the conditions were greatly exaggerated, especially as to loss of life and medical needs. I suggested to Lieut. Col. Hall that we should send medical officers at once to make medical surveys of these valleys and to report conditions and needs promptly in order that these could be met systematically and economically. From the State health officer I ascertained that widespread epidemics of smallpox, typhoid fever, and meningitis had been going on in the towns and cities along these rivers. Majs. P. C. Hutton, S. H. Wadhams, Capt. J. R. Bosley, and Lieut. E. C. Register, all of the Medical Corps, United States Army, were detailed for the purpose of making these medical surveys. These officers were supplied with the prophylactic vaccines and sera against the infectious diseases known to be in the districts they were about to visit. They were instructed to get in touch with the mayors, health officers, and local relief committees in the different municipalities: to work through them, ascertaining the conditions and medical needs of each locality, and offering their services in formulating systems of relief, and the prophylactics necessary to combat any epidemic diseases present or feared, also to promptly report to me the medical needs which they were unable to supply, the kind and quantity and the necessity therefor.

Lieut. Col. Hall, surgeon general, Ohio National Guard, detailed some of his medical officers forsimilar work, and with the same instructions. The work of all these medical

officers was excellent, thorough, and expeditiously performed. In consequence, reliable information of the condition of the flooded districts began to arrive soon after their departure, and the needs of the people were satisfactorily met without undue waste. The needs reported were met either from the United States Army supplies, which I had at Columbus, or by purchase by Lieut. Col. Hall, or by the National Red Cross Association, in charge of Mr. Bicknel, or the Ohio flood relief committee. The correlating of these relief agencies in meeting the medical needs of the flooded districts as reported to me was done without any friction and enabled the work to be done with the utmost speed.

A field hospital was turned over to the surgeon general, Ohio National Guard, to be erected and operated by his officers at Portsmouth. Sufficient vaccine virus, antityphoid vaccine, and antimeningococcic were furnished to many places throughout Ohio to meet the immediate needs. Medical and surgical supplies were furnished wherever requested by the surgeon general, Ohio National Guard.

After completing the work of survey in Ohio, Majs. Hutton and Wadhams, and Capt. Bosley and Lieut. Register and three sergeants accompanied Maj. Normoyle down the Mississippi as far as Vicksburg for the purpose of doing similar work along that river. The remainder of the Medical Department personnel not needed elsewhere remained in Dayton.

The medical officers on duty with the troops from Columbus Barracks in the flooded section of the city cooperated with me and put into operation most satisfactorily the necessary sanitary measures to meet the conditions in the section under the supervision of Col. G. A. Dodd, United States Army. Too much can not be said in praise of the prompt, thorough, and continuous work done by Col. Dodd and his command in meeting the needs of the people of the flooded section of Columbus.

On April 24, Maj. Fauntleroy received a letter from the governor of Ohio, relieving him from duty with the relief work and expressing his appreciation of the services rendered by him and his assistants.

The Secretary of War, accompanied by the Chief of Staff and other officers from the War Department, visited Dayton, Ohio, on March 20, 1913, and while there directed Maj. Thomas L. Rhoads, Medical Corps, to take charge of the sanitary situation in the city under the following order:

> The governor of Ohio having requested the Secretary of War to take charge of the sanitary situation in the city of Dayton, Ohio, and immediate vicinity, Maj. Thomas L. Rhoads is hereby designated as chief sanitary officer in charge of the conduct of the necessary work under the general instructions which are given him.

Maj. Rhoads divided the city into 16 sanitary districts and took charge of the relief work and cleaning up of the city, working in conjunction with the National Guard, Red Cross, and citizens' relief committee.

A relief camp was established by him on the fair grounds on March 31 and remained in operation until April 15, the average daily number of refugees at the camp being 208, the average daily number fed 262. As stated above, the medical officers on duty with Maj. Rhoads were: Maj. Paul C. Hutton, Capt. John A. Clark, Capt. George P. Peed, Capt. Arthur M. Whaley, Capt. John S. Lambie, jr., Capt. Morrison C. Stayer. There were also 7 sergeants, 3 corporals, and 36 privates of the Hospital Corps.

Maj. Rhoads performed his difficult and responsible duties with energy and efficiency. He was relieved on April 25.

THE CARE OF MEXICAN WOUNDED BY MEDICAL OFFICERS AND HOSPITAL CORPS MEN, UNITED STATES ARMY.

Maj. W. R. Eastman, Medical Corps, reported on December 28, 1912, that 22 Mexican Federals and 10 Mexican insurgents, wounded at Palomas, Mexico, November 21, 1912, were treated at Columbus, N. Mex., from November 23 to December 4, 1912, by him with the

assistance of Capt. W. L. Hart, Medical Corps, Dr. Ellard (local practitioner), Sergt. Raymond, Hospital Corps, and six privates, first class, and privates, Hospital Corps. He stated that:

The majority of the cases were fearfully infected. All the wounds were treated with tincture of iodin and through and through irrigations of weak solution of iodin and normal salt used whenever possible with external drainage. All improved under careful and tedious treatment, except Nos. 6 and 12, which were hopeless from the beginning.

The 30 survivors were transferred, on December 4, 1912, by order of the commanding general, patrol district of El Paso, Fort Bliss, Tex., the Federals to the military hospital, Juarez, Mexico, and the rebels to the Hotel Dieu, El Paso, Tex.

The Mexican Federal forces on March 15, 1913, attacked the position of the insurgent forces on the hills 4 miles east of Naco, Mexico, about one-half mile from the international line. On April 8 and April 13, 1913, general attacks were made by the Mexican insurgents on the Federals occupying the town of Naco, Mexico. Maj. Louis Brechemin, Medical Corps, on April 5 notified the commanding officers of both forces that assistance would be furnished the wounded, if desired. Medical officers, Hospital Corps men, and hospital equipment from camps in the vicinity were assembled at Naco, Ariz., at the suggestion of Maj. Brechemin. A hospital was established on the first floor of the opera house in Naco, Ariz. Ambulances and searching parties were sent out after both attacks. Most of the wounded, however, were brought over either by American civilians, by Mexicans, or reached the hospital unassisted.

One hundred and fourteen wounded received assistance at the hospital established. Of this number 40 were Federals, 70 were insurgents, and in 4 cases the side was not stated.

Maj. Brechemin was assisted by Capt. Worthington, Lieuts. Van Kirk, and Ingold, Medical Corps, Dr. Randall of Douglas, Ariz., 2 other civilian physicians (names not given), 2 sergeants and 9 privates, and privates first class, Hospital Corps. Col. Guilfoyle, Ninth Cavalry, detailed extra men from the troops to assist at the hospital, and rendered assistance in every other way possible. The medical supplies, dressings, most of the bedding, and food for the patients while in hospital were supplied by the United States Government. Mr. Greenway and Dr. Ricketts, American civilians, donated 50 spring cots and several bales of quilts, as well as many other articles which could not otherwise be procured.

Maj. Brechemin says:

The work of the medical officers left nothing to be desired. They exercised splendid judgment and their surgical work was excellently performed. I desire to especially commend them for their zeal and energy and the way they took hold of the situation.

The detachment of the Hospital Corps here is made up of men recently transferred from the line and some recruits. In spite of this fact their work was gratifying in the extreme. They were on duty long hours and the work was hard, but they took hold quickly and were alive to the situation. None of the patients were neglected for a single instant by the Hospital Corps men.

Six deaths occurred among the wounded treated. The wounded having been disposed of by turning them over to the proper authorities, the hospital was closed on April 23.

The following quotations from Maj. Brechemin's report is inserted, as a matter of general interest:

April 8: The insurgent forces made a general attack on Naco, Sonora, commencing at daylight. The firing was continuous and heavy. The Ninth Cavalry camp, notwithstanding the fact that it was protected by lines of loaded freight cars was under a

heavy fire. One trooper was wounded in the shoulder by Mauser bullet and one teamster shot through wrist and thigh. The camp hospital, which had been placed in a small hollow behind cars, was subject to rifle fire and had to be vacated. The dressings and litters were removed to railroad embankment.

April 13: The attack commenced at 3.30 a. m., with heavy firing on both sides. The hospital was under fire and bullets struck the building but did no damage. At 4 a. m., wounded began to arrive at hospital brought in by patrols and machines belonging to Sheriff Wheeler and others. The first man to arrive at hospital was a Federal officer shot in the neck, followed by a lieutenant of the insurgent forces, who had been wounded in the thigh. A few minutes later a Yaqui came in severely wounded by a hand grenade. From then on the wounded came in a steady stream.

PLAGUE IN PORTO RICO.

When bubonic plague was reported in June, 1912, in San Juan, P. R., at the urgent request of the Chief of the Bureau of Insular Affairs, the Secretary of War issued an order for Lieut. Col. J. R. Kean as epidemilogical, and Maj. F. F. Russell as laboratory expert, with First Lieut. F. H. Foucar as assistant (all of the Medical Corps, United States Army), with the necessary assistant, to proceed to San Juan for special duty. The urgent necessity of limiting the spread of this epidemic by early, prompt, efficient measures was recognized. Lieut. Col. Kean reported in part as follows:

Having been authorized by the Secretary to take the necessary personnel and equipment to establish a plague laboratory, I sailed from New York June 22, accompanied by Maj. F. F. Russell and Lieut. F. H. Foucar, Medical Corps; three enlisted men of the Hospital Corps, and a regulation field laboratory outfit. We arrived June 27. We spent the 27th and 28th inspecting the localities where plague had appeared, and in observing the measures which were being put into operation for its suppression. There had been up to the time of our arrival 22 cases of human plague—

San Juan (old city)	2
Puerta de Tierra	16
Santurce	3
Caroline	1
	22

But little was known as to the distribution of the plague among the rat population until the plague laboratory had been a week in operation.

A building had already been selected and cleaned out for use as a laboratory, but the putting in of the water supply and especially the fly-proof screening which is essential in such dangerous work delayed its occupation until the 29th, when Maj. Russell moved in and immediately began work. A beginning in the examination of rats had been made by Dr. Gomez Martinez, chief of the laboratory of the sanitary department, who up to the time of the establishment of Russell's plague laboratory had examined 284 rats, of which 15 were found infected. Unfortunately the importance of examination of all rats obtainable, in order to determine the degree of prevalence of the disease among them and its accurate distribution, was not appreciated, and only sample lots of those killed were furnished to the laboratory, and no spot map of those found infected was made. This neglect to send to the plague laboratory the bodies of rats caught and killed persisted to a considerable degree up to the time of our departure in spite of our efforts to impress upon the various officials of the sanitary department and the populace generally the importance of sending rats to the laboratory with tags marking the place where caught. This was true of the quarantine service also; of the large number of rats killed by fumigation on board vessels in the harbor very few reaching the laboratory.

A large number of rats were examined and much valuable information obtained relative to the distribution of the epidemic among the rodents. A sanitary survey of San Juan and the neighboring town was made by Lieut. Col. Kean. Daily conferences were held with the acting governor, the director of sanitation, and Dr. Creel, of the public health service. Dr. Creel, who had had experience in

plague work in San Francisco, and who was well qualified to take charge of the special plague work, assumed charge after some days. The laboratory established by Maj. Russell, with its equipment, was turned over to Dr. Creel's assistants on July 9. The work then being well started, and there being no necessity for the medical officers to remain longer, they returned to their proper station. The anti-plague work was successfully completed by Dr. Creel.

WORK OF MAJ. CLYDE S. FORD, MEDICAL CORPS, AT CONSTANTINOPLE IN CONNECTION WITH THE AMERICAN RED CROSS DURING THE BALKAN WAR.

When the Balkan War began Maj. Ford was in Paris on sick leave. He left that city on November 1, 1912, for Constantinople, arriving there on November 4. He was immediately placed in charge by the American Red Cross of a field hospital which he improvised and organized in connection with the Turkish hospital. He assumed professional charge of two wards with 60 beds each, and three days after his arrival in Constantinople he began the professional care of 120 wounded Turkish soldiers.

On December 4, 1912, Maj. Ford was directed by the War Department to report to the American ambassador at Constantinople for such duty as he might direct, and upon the completion of the duty assigned to revert to his status of sick leave. He remained in charge of this hospital work until the latter part of the summer of 1913. He incidentally made an inspection of the cholera situation at San Stefano on November 18. As the result of this inspection he returned to San Stefano on November 23 with a small party under the direction of the American Red Cross and took charge of the sanitary work in a cholera camp containing about 600 sick soldiers. With the exception of a few days required in Constantinople to supervise the work which was under his direction there, he was occupied with this work in cholera camps until December 9, when it was formally turned over to the British Red Crescent Society. After two months of regular professional work, Maj. Ford then took charge of a very important piece of work, but one which he described as uninviting, pain, and inglorious. The work referred to was the establishing, financing, and operating of the general hospital laundry for a large Turkish hospital. He states that all the hospital linen from the wards and storeroom had passed into a large and unspeakably dirty pile of some 15,000 pieces. As there was no one who seemed either able or inclined to relieve this unhappy and unsanitary state of affairs, he volunteered to assume charge of the work. This office has been informed through several sources of the unselfish and generous work performed voluntarily by Maj. Ford.

OBSERVATIONS BY MAJ. P. C. FAUNTLEROY, MEDICAL CORPS, UNITED STATES ARMY, IN THE BALKANS.

In accordance with the directions of the Secretary of War of November 23, 1912, Maj. P. C. Fauntleroy, Medical Corps, left Washington on November 24 for the seat of the war in the Balkans.

He went to Vienna, thence to Sofia, Bulgaria. He made careful observations of the work of the medical department there, and then proceded as near the field of actual hostilities as the authorities

would allow him. After completing these observations he went to Constantinople, where the work of the Turkish medical department, with the Associated Red Crescent and Red Cross Societies, was carefully observed. Several very valuable and interesting reports giving in detail the results of his extended observations were furnished the War Department by him. He returned to Washington February 14, 1913.

STUDIES IN PELLAGRA.

Through the instrumentality of Dr. George N. Miller, then president of the New York Post-Graduate Medical School, funds were donated by Col. Robert M. Thompson, of New York City, and Mr. J. H. McFadden, of Philadelphia, to support a research expedition for the investigation of pellagra in the United States to be sent out under the auspices of the New York Post-Graduate School. Capt. J. F. Siler, Medical Corps, United States Army, was the representative of the Medical Corps of the Army on the commission which was formed. A field headquarters was established in the South at Spartanburg, S. C., early in June, 1912, and field studies were continued until October 15, 1912. Several hundred cases were very carefully studied and the statistics very carefully compiled. When the field service was discontinued the work of the regular commission was continued in the laboratories of the New York Post-Graduate Medical School. The report of "An Intensive Study of the Epidemiology of Pellagra" was published in the American Journal of Medical Sciences, June and July, 1913.

Additional funds have been donated, and further work will be done by the commission. Many valuable and interesting points in the epidemiology of this disease have been brought out by the commission.

FLOOD RELIEF WORK, 1912.

During the overflow of the Mississippi River in May and June, 1912, Maj. R. B. Miller and Capt. J. M. Coffin, Medical Corps, were detailed for duty with the relief force of the United States Army. Excellent work was done by both of these officers. A sanitary inspection for the Red Cross was made of the refugee camps, of the flooded region, by Lieut. Col. J. R. Kean, Medical Corps, under orders from the Secretary of War.

THE MILITARY SHOE—MUNSON.

A book on "The Soldier's Foot and the Military Shoe," by Maj. E. L. Munson, Medical Corps, with the approval of the War Department, was published in 1912. Maj. Munson was president of the Army Shoe Board, which conducted a series of experiments lasting over four years and included the critical study of the feet of some 2,000 soldiers, together with the fitting of many thousand shoes. This book embodies the experience of Maj. Munson himself and the shoe board. Its purpose is to supply practical information on the subject, and it should be carefully studied by all whose duties require them to either fit or supervise the fitting of shoes in the Army.

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SANITARY TROOPS OF THE ORGANIZED MILITIA.

The following is an extract from a report furnished this office by Maj. Harry L. Gilchrist, Medical Corps, United States Army, detailed for duty in the office of the chief, Division Militia Affairs, War Department:

While there has been some improvement in the efficiency of the sanitary troops of the Organized Militia during the past year, yet this improvement has not been as great nor as general as is desired, and as essential to securing real efficiency. The principal causes of the present unsatisfactory condition are lack of proper equipment, of suitable instructors, of proper support and encouragement on the part of the State authorities, and to some extent inefficient personnel in the Medical Department itself of the Organized Militia. As to these different causes it may be said that a large part of the equipment now on hand is either obsolete or worn out; that there are no inspector-instructors of the Regular Army on duty with the Medical Department of the Organized Militia, as is the case in all other branches of the service; that there is great reluctance on the part of State adjutants general to make requisition for modern equipment in sufficient quantities; that a part of the personnel, not knowing the real duties of this branch of the service in the field, fail to realize the character and amount of training necessary, and consequently tolerate many men who, while they may be efficient practitioners in civil life, are entirely ignorant of their duties in the field. The entire matter may be summed up by saying that there is still a generally prevalent idea that a medical officer is merely a doctor practicing his profession under possibly different conditions in the field from those obtaining in civil life, but that there is no substantial difference in the character of his work. That the practice of medicine is only a small part of his duties is by no means generally recognized either by State authorities or by a large number of the medical officers themselves, and consequently no material improvement can be looked for until a more correct conception of the duties of medical officers and sanitary troops in the field is obtained. The best method of establishing correct ideas on the subject is, according to the chief, Division of Militia Affairs, to detail medical officers of the Regular Army as inspector-instructors of the Organized Militia, as is done in the case of other arms. In this recommendation the Surgeon General concurs and his office will do everything within its power to assist in carrying out this idea. The presence of these officers continuously with the Organized Militia will serve to disseminate correct ideas as to field duty, would show the necessity of proper and adequate equipment, will standardize instruction generally, and will secure true progress.

Inasmuch as the organization and instruction of the sanitary troops in the different States are left entirely to State administration, few have adopted the same plan or routine in the matter, and as a result all have separate and distinct forms. This results in many different varieties of medical organizations, some good, others poor. In some the commissioned officers are appointed by the regimental officers, the only requirement being an acceptable personality; in other States commissioned officers are only appointed after having successfully passed rigid examinations. In some States the commissioned personnel is entirely too large for the number of troops in the State, but in the majority of the States the enlisted personnel is much too small. To overcome some of these objections the Division of Militia Affairs has prepared a plan of organization for the medical departments of the Organized Militia which corresponds as nearly as possible with the act governing the organization of the medical establishment of the Regular Army. A plan of instruction has also been worked out for the sanitary troops of the Organized Militia which is along the lines followed by similar troops in the regular establishment. The scheme of instruction is quite complete and covers all subjects the commissioned officer and the enlisted man of the medical department should be familiar with. The course for officers is of a four years' duration. For the enlisted men a two years' course has been prepared.

The strength of the sanitary troops of the Organized Militia, as shown by the annual inspections in 1913, is shown in the table below.

Heretofore the number of enlisted men in the Hospital Corps in the majority of the States has been far below the minimum requirements, and no efforts were made to keep this branch of the military service up to the standard. In Circular No. 8, War Department, Division of Militia Affairs, August 1, 1913, provisions have been made to accomplish this purpose. Hereafter States that have medical organizations will be obliged to keep their sanitary personnel up to meet the legal requirements. A maximum number has been prescribed for each regiment, battalion, field hospital, and ambulance company, which will be strictly adhered to.

An effort is also being made to have regimental infirmaries with all regiments, these infirmaries to be complete in all respects and all obsolete and worn-out property replaced by new.

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CONSTRUCTION AND REPAIR OF HOSPITALS.

During the past year plans and specifications were prepared and contracts were entered into for the construction of isolation wards at Fort Bliss, Tex., Fort Oglethorpe, Ga., and Fort Totten, N. Y.; dormitories at the Army and Navy General Hospital, Hot Springs, Ark., and the Letterman General Hospital, San Francisco, Cal., for the Army Nurse Corps; a hydrotherapeutic plant and an additional ward at the Walter Reed General Hospital, Takoma Park, D. C.; a hydrotherapeutic ward, a sterilizing and disinfecting building, and an addition to the detention ward at the Letterman General Hospital, San Francisco, Cal.; and additional wards to the hospitals at Fort Bliss, Tex., Fort Huachuca, Ariz., and Fort Shafter, Hawaii; and for additions and improvements to the hospitals at Fort H. G. Wright, N. Y., Fort Monroe, Va., Fort Sill, Okla., and Fort D. A. Russell, Wyo. A small temporary hospital was also erected at Camp Yosemite, Cal.

Two sets of plans and specifications were prepared for an isolation ward at Fort Benjamin Harrison, Ind. Proposals were invited, but all bids received were largely in excess of the amount available for such a building and had to be rejected. It appears that the location of this post renders it impossible to erect a suitable isolation ward for the limited sum of $20,000 fixed by section 1136, Revised Statutes.

The following buildings which were contracted for during the fiscal year ending June 30, 1912, have been completed: Isolation wards at Fort D. A. Russell, Wyo., and Fort Sheridan, Ill.; additions to the main hospital building at the Walter Reed General Hospital, Takoma Park, D. C., Fort Monroe, Va., the Letterman General Hospital, San Francisco, Cal., the Presidio of Monterey, Cal., Fort Sill, Okla., Fort Shafter, Hawaii, and at Fort Yellowstone, Wyo.; and an addition to the dormitory at the Army Nurse Corps, Walter Reed General Hospital, Takoma Park, D. C.

An allotment of $60,000 was made from the appropriation for construction and repair of hospitals for use in the Philippines Department during the fiscal year, and $2,000 from the appropriation for quarters for sergeants, first class, Hospital Corps, to cover the cost of quarters for these noncommissioned officers in the Philippines.

In addition to the foregoing the Army general hospitals and the hospitals at military posts were improved or kept in proper repair so far as funds would permit.

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ARTIFICIAL LIMBS AND APPARATUS.

Under laws relating to artificial limbs and apparatus, or commutation therefor, orders on manufacturers were given during the fiscal year for 17 legs and 1 foot. Commutation certificates were issued for 155 cases of amputated leg, 92 of amputated arm, 7 of amputated foot, and 1,667 cases of loss of use of limb.

Under the act of June 17, 1870, and subsequent amendments thereto, 23,583 disabled soldiers and sailors have been furnished artificial limbs or apparatus, or have received commutation in money since the passage of the act, as follows: Total number benefited to June 30, 1913, 23,583; died, 14,236; dropped from rolls, 592; rejected after one or more payments, 571; remaining on rolls at end of fiscal year, 8,192, being a loss of 321 beneficiaries during the year. Two-thirds of the periodical claims for benefits under the artificial-limb laws for the three years ending June 30, 1917, become due in the fiscal year 1915. To meet these claims it is estimated that the sum of $275,000 will be required.

* * * * * * *

ARMY MEDICAL MUSEUM.

The total number of specimens in the museum at the close of the fiscal year 1913 is 35,151. During the year 315 were discarded or given away and 868 were added.

The following statement shows the number of specimens in the different sections:

Pathological section	13,022
Anatomical section	1,197
Comparative anatomy	620
Microscopical section	12,916
Miscellaneous section	3,781
Provisional anatomical section	360
Photographic section	3,255

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DENTAL AND ORAL DISEASES.

The number of dental operations during the year was 66,683, being an increase over the preceding year, which was 57,454. The ratio per 1,000 of mean strength was also greater, being 780.61, as compared with 716.54. This, however, can not be taken as a measure of the dental diseases of the Army, but represents what the number of dentists available are able to accomplish. The number of dentists authorized has been increased by Congress, so that ultimately each man in the Army can receive at least one treatment yearly.

The summary of the work of dental surgeons is contained in the following table:

TABLE No. 47.—*Dental and oral diseases, year 1912—Officers and enlisted men.*

	Cases admitted to treatment.		Operations performed.	
	Number.	Ratio.	Number.	Ratio.
United States (continental), exclusive of Alaska	44,280	721.11	48,048	782.48
Philippine Islands	17,138	925.28	21,168	1,142.86
Hawaii	3,355	945.33	2,863	806.71
Canal Zone, Panama	1,008	1,248.82	1,408	1,744.73
China	902	790.58	978	857.14
Total	66,683	780.61	74,465	871.71

TABLE NO. 47.—*Dental and oral diseases, year 1912—Officers and enlisted men*—Contd.

DENTAL CARIES—NUMBER OF TEETH TREATED.

	White troops.		Colored troops.		Philippine troops.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
United States (continental), exclusive of Alaska	28,578	485.06	216	86.82	.....	.....	28,794	468.92
Philippine Islands	7,800	663.04	1,033	764.62	616	113.93	9,449	510.15
Hawaii	1,744	491.41	.....	.....	.....	.....	1,744	491.41
Canal Zone, Panama	677	838.91	.....	.....	.....	.....	677	838.91
China	505	442.59	.....	.....	.....	.....	505	442.59
Total	39,304	515.95	1,249	325.35	616	113.93	41,169	481.94

RECRUITING.

AMERICAN TROOPS.

The movement of recruits is shown in Table No. 48. Each recruit before enlistment was given a thorough examination by a medical officer of the Army. There were 32,738 examined, as compared with 50,534 for the preceding year. Of each 1,000 examined, 120.96 were rejected and 23.86 declined enlistment, as compared with 90.55 and 16.33 for 1911. Of each 1,000 examined by medical officers, 855.18 were accepted, as compared with 893.12 for 1911. Of the number examined and enlisted, 308.51 per 1,000 were reenlistments and 546.67 were original enlistments, as compared with 408.52 and 484.60 for 1911.

TABLE NO. 48.—*Movement of recruits, white and colored, 1912.*

	White.		Colored.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Examined by medical officers	30,374	1,000.00	2,364	1,000.00	32,738	1,000.00
Accepted by medical officers	25,952	854.42	2,045	865.06	27,997	855.18
By first enlistment	16,381	539.31	1,516	641.29	17,897	546.67
By all other enlistments	9,571	315.11	529	223.77	10,100	308.51
Rejected by medical officers	3,680	121.16	280	118.44	3,960	120.96
Declined	742	24.43	39	16.50	781	23.86

This table shows only the applicants who had previously passed the scrutiny of the recruiting officers at the various recruiting stations in cities and towns and who were therefore picked men. The number of examinations and of rejections by recruiting officers is not known to this office, but was, of course, much larger. The present recruiting system operates in a highly satisfactory manner and furnishes to the Army recruits of far better quality than when they were examined under the former system of civilian physicians at the places of enlistment.

* * * * * * *

The following tables have been carefully compiled and are of interest, as they show the state of physical development of the men admitted to the Army during the year. The ages of all the recruits accepted, including those reenlisted, white and colored, and the proportion at each age per 1,000 are shown in this statement.

TABLE NO. 50.—*Ages of recruits, white and colored, and the proportion at each age per 1,000 accepted.*

Agse.	White.		Colored.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
18 years and under	1,989	76.64	125	61.13	2,114	75.51
19 years	1,148	44.24	97	47.43	1,245	44.47
20 years	600	23.12	57	27.87	657	23.47
21 years	6,118	235.74	412	201.47	6,530	233.24
22 years	2,555	98.45	227	111.00	2,782	99.36
23 years	1,604	61.81	156	76.28	1,760	62.86
24 years	1,808	69.67	156	76.28	1,964	70.15
25 years	1,421	54.76	113	55.26	1,534	54.79
26 years	1,123	43.27	99	48.41	1,222	43.65
27 years	1,072	41.31	98	47.92	1,170	41.79
28 years	896	34.53	76	37.16	972	34.72
29 years	766	29.52	55	26.90	821	29.32
30 years	628	24.20	50	24.45	678	24.22
31 years	577	22.23	41	20.05	618	22.07
32 years	558	21.50	42	20.54	600	21.43
33 years	449	17.30	52	25.43	501	17.90
34 years	356	13.72	20	9.78	376	13.43
35 years	305	11.75	21	10.27	326	11.64
36 years	297	11.44	23	11.25	320	11.43
37 years	234	9.02	24	11.74	258	9.22
38 years	176	6.78	17	8.31	193	6.89
39 years	172	6.63	16	7.82	188	6.71
40 years and over	1,100	42.39	68	33.25	1,168	41.72
Total	25,952	1,000.00	2,045	1,000.00	27,997	1,000.00

The proportion of accepted recruits under the age of 24 has noticeably increased in comparison with last year, being due undoubtedly to the much larger proportion of original enlistments of each 1,000 recruits examined and accepted by medical officers. Six hundred and nine and sixty-seven one-hundredths were 24 years of age or under as compared with 558.11 in 1911. The ages of 21 and 22 this year, as last year, furnished the largest number for any age in the order named.

The series of tables which follow show separately for each race the height of accepted recruits for the year, and the proportion of each height per 1,000; also, in absolute and proportional numbers, the relation of height to age.

TABLE NO. 51.—*Relation of height to age.*

ABSOLUTE NUMBERS—WHITE RECRUITS, YEAR 1912.

Heights.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
5 feet 1 inch and under									1	1
5 feet 2 inches	2			4			3	1	5	15
5 feet 3 inches	18	14	9	56	29	12	15	6	88	247
5 feet 4 inches	164	96	43	357	140	86	110	77	538	1,611
5 feet 5 inches	296	152	75	602	264	170	176	161	912	2,808
5 feet 6 inches	353	205	80	895	389	226	222	196	1,288	3,854
5 feet 7 inches	350	196	116	1,108	427	272	305	246	1,511	4,531
5 feet 8 inches	346	193	110	1,014	416	302	300	247	1,460	4,388
5 feet 9 inches	208	140	78	868	343	214	270	193	1,115	3,429
5 feet 10 inches	151	82	53	643	283	177	179	135	870	2,573
5 feet 11 inches	68	40	21	325	140	77	117	92	476	1,356
6 feet	26	20	10	162	86	46	71	45	268	734
6 feet 1 inch	4	5	1	53	22	14	24	17	104	244
6 feet 2 inches and over	3	5	4	31	16	8	16	5	73	161
Total	1,989	1,148	600	6,118	2,555	1,604	1,808	1,421	8,709	25,952

TABLE No. 51.—*Relation of height to age*—Continued.

PROPORTIONAL NUMBERS—WHITE RECRUITS, YEAR 1912.

Heights.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
5 feet 1 inch and under									0.11	0.04
5 feet 2 inches	1.01			0.65			1.66	0.70	.57	.58
5 feet 3 inches	9.05	12.20	15.00	9.15	11.35	7.48	8.30	4.22	10.11	9.52
5 feet 4 inches	82.45	83.62	71.67	58.35	54.80	53.61	60.84	54.19	61.78	62.08
5 feet 5 inches	148.82	132.40	125.00	98.40	103.33	105.99	97.35	113.30	104.73	108.20
5 feet 6 inches	177.48	178.57	133.33	146.29	152.26	140.90	122.79	137.93	147.89	148.50
5 feet 7 inches	175.97	170.73	193.33	181.11	167.11	169.58	168.70	173.12	173.50	174.59
5 feet 8 inches	173.95	168.12	188.33	165.75	162.82	188.28	165.92	173.82	167.64	169.09
5 feet 9 inches	104.58	121.96	130.00	141.87	134.25	133.41	149.33	135.82	128.03	132.12
5 feet 10 inches	75.92	71.43	88.33	105.10	110.77	110.36	99.01	95.71	99.90	99.14
5 feet 11 inches	34.19	34.85	35.00	53.12	54.80	48.01	64.72	64.74	54.66	52.24
6 feet	13.07	17.42	16.67	26.48	33.66	28.68	39.27	31.67	30.77	28.28
6 feet 1 inch	2.01	4.36	1.67	8.66	8.61	8.73	13.27	11.96	11.94	9.40
6 feet 2 inches and over	1.51	4.36	6.67	5.07	6.26	4.99	8.85	3.52	8.38	6.20
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

TABLE No. 52.—*Relation of height to age.*

ABSOLUTE NUMBERS—COLORED RECRUITS, YEAR 1912.

Heights.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
5 feet 1 inch and under										
5 feet 2 inches										
5 feet 3 inches			1	3	1	4	3		4	16
5 feet 4 inches	19	7	3	33	14	11	8	8	32	135
5 feet 5 inches	19	22	7	54	30	9	22	18	81	262
5 feet 6 inches	21	15	13	61	30	28	21	20	116	325
5 feet 7 inches	24	17	4	66	42	31	28	24	125	361
5 feet 8 inches	18	17	5	78	40	24	23	14	104	323
5 feet 9 inches	14	8	11	51	24	25	20	14	106	273
5 feet 10 inches	6	6	4	35	22	12	15	5	71	176
5 feet 11 inches	4	3	3	22	16	6	8	6	36	104
6 feet		2	4	5	6	4	5	3	18	47
6 feet 1 inch			1	3	1	1	2		7	15
6 feet 2 inches and over			1	1	1	1	1	1	2	8
Total	125	97	57	412	227	156	156	113	702	2,045

PROPORTIONAL NUMBERS—COLORED RECRUITS, YEAR 1912.

5 feet 1 inch and under										
5 feet 2 inches										
5 feet 3 inches			17.54	7.28	4.41	25.64	19.23		5.70	7.82
5 feet 4 inches	152.00	72.17	52.63	80.09	61.67	70.51	51.29	70.80	45.58	66.02
5 feet 5 inches	152.00	226.80	122.81	131.07	132.16	57.69	141.03	159.30	115.38	128.12
5 feet 6 inches	168.00	154.64	228.07	148.06	132.16	179.49	134.62	176.99	165.24	158.93
5 feet 7 inches	192.00	175.26	70.18	160.19	185.03	198.72	179.49	212.39	178.06	176.53
5 feet 8 inches	144.00	175.26	87.72	189.32	176.21	153.85	147.44	123.89	148.15	157.96
5 feet 9 inches	112.00	82.48	193.00	123.79	105.73	160.26	128.21	123.89	151.00	133.50
5 feet 10 inches	48.00	61.86	70.18	84.95	96.92	76.92	96.15	44.25	101.14	86.07
5 feet 11 inches	32.00	30.93	52.63	53.40	70.48	38.46	51.29	53.10	51.28	50.86
6 feet		20.62	70.18	12.14	26.43	25.64	32.05	26.55	25.64	22.98
6 feet 1 inch			17.54	7.28	4.41	6.41	12.82		9.97	7.33
6 feet 2 inches and over			17.54	2.43	4.41	6.41	6.41	8.85	2.85	3.91
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

It will be noted that 49.65 per cent of the white recruits were 5 feet 8 inches or over and 1.01 per cent were under the minimum height of 5 feet 4 inches, as compared with 49.07 and 1.12 for the previous year.

For colored troops 46.26 were 5 feet 8 inches or over and 0.78 per cent were under the minimum height, as compared with 46.59 and 1.02.

The average height for recruits was 5 feet 7.57 inches, as compared with 5 feet 7.56 inches in 1911.

The following tables show separately for each race the weight of accepted recruits and the proportion of each weight per 1,000; also the relation of weight to age in both absolute and proportional numbers:

TABLE No. 53.—*Relation of weight to age.*

ABSOLUTE NUMBERS—WHITE RECRUITS YEAR 1912.

Weights.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
119 pounds and under	40	22	3	57	21	15	23	12	120	313
120 to 124 pounds	338	155	63	436	139	61	64	60	358	1,674
125 to 129 pounds	392	209	89	680	231	141	147	125	609	2,623
130 to 134 pounds	371	212	101	896	337	188	211	164	834	3,314
135 to 139 pounds	318	164	100	1,044	400	250	257	182	1,012	3,727
140 to 144 pounds	203	153	72	906	371	246	259	190	1,067	3,467
145 to 149 pounds	129	98	77	740	301	204	233	195	983	2,960
150 to 154 pounds	92	57	38	546	240	181	197	162	892	2,405
155 to 159 pounds	44	32	29	316	228	128	143	112	651	1,683
160 to 164 pounds	31	18	17	212	111	75	96	88	528	1,176
165 to 169 pounds	16	10	5	125	76	44	74	48	449	847
170 to 174 pounds	7	9	2	77	43	25	43	29	334	569
175 to 179 pounds	5	4	2	39	32	19	25	18	228	372
180 pounds and over	3	5	2	44	25	27	36	36	644	822
Total	1,989	1,148	600	6,118	2,555	1,604	1,808	1,421	8,709	25,952

PROPORTIONAL NUMBERS—WHITE RECRUITS YEAR 1912.

119 pounds and under	20.11	19.16	5.00	9.32	8.22	9.35	12.72	8.44	13.78	12.06
120 to 124 pounds	169.93	135.02	105.00	71.27	54.40	38.03	35.40	42.22	41.11	64.50
125 to 129 pounds	197.08	182.06	148.33	111.15	90.41	87.91	81.30	87.96	69.92	101.07
130 to 134 pounds	186.52	184.67	168.33	146.46	131.89	117.21	116.70	115.41	95.76	127.70
135 to 139 pounds	159.88	142.86	166.67	170.64	156.56	155.86	142.14	128.08	116.20	143.61
140 to 144 pounds	102.06	133.27	120.00	148.09	145.21	153.37	143.25	133.71	122.51	133.60
145 to 149 pounds	64.86	85.37	128.33	120.96	117.81	127.18	128.87	137.22	112.87	114.06
150 to 154 pounds	46.26	49.65	63.33	89.25	93.93	112.84	108.96	114.01	102.43	92.67
155 to 159 pounds	22.12	27.88	48.33	51.65	89.24	79.80	79.10	78.82	74.75	64.85
160 to 164 pounds	15.59	15.68	28.33	34.65	43.45	46.76	53.10	61.93	60.63	45.32
165 to 169 pounds	8.04	8.71	8.33	20.43	29.75	27.43	40.93	33.78	51.56	32.64
170 to 174 pounds	3.52	7.84	3.33	12.59	16.83	15.59	23.78	20.41	38.35	21.93
175 to 179 pounds	2.51	3.48	3.33	6.37	12.52	11.84	13.83	12.67	26.18	14.33
180 pounds and over	1.51	4.36	3.33	7.19	9.78	16.83	19.91	25.34	73.94	31.67
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

TABLE No. 54.—*Relation of weight to age.*

ABSOLUTE NUMBERS—COLORED RECRUITS YEAR 1912.

Weights.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
119 pounds and under	.....	1	1	3	1	1	.....	.....	1	8
120 to 124 pounds	12	7	2	20	7	4	.....	2	18	72
125 to 129 pounds	18	19	9	31	14	12	7	4	36	150
130 to 134 pounds	32	14	7	51	23	19	15	11	56	228
135 to 139 pounds	24	16	10	71	33	26	19	13	79	291
140 to 144 pounds	13	13	7	51	29	23	23	16	91	266
145 to 149 pounds	13	13	3	59	34	17	18	12	96	265
150 to 154 pounds	8	7	6	45	28	15	21	15	81	226
155 to 159 pounds	4	5	1	32	26	10	15	17	63	173
160 to 164 pounds	1	.....	5	20	11	14	15	6	43	115
165 to 169 pounds	.....	1	2	11	8	8	12	7	41	90
170 to 174 pounds	.....	.....	1	9	5	3	1	4	23	46
175 to 179 pounds	.....	1	2	4	4	2	5	2	24	44
180 pounds and over	.....	.....	1	5	4	2	5	4	50	71
Total	125	97	57	412	227	156	156	113	702	2,045

PROPORTIONAL NUMBERS—COLORED RECRUITS YEAR 1912.

119 pounds and under	.....	10.31	17.54	7.28	4.41	6.41	.....	.....	1.42	3.91
120 to 124 pounds	96.00	72.17	35.09	48.54	30.84	25.64	.....	17.70	25.64	35.21
125 to 129 pounds	144.00	195.88	157.90	75.24	61.67	76.92	44.87	35.40	51.28	73.35
130 to 134 pounds	256.00	144.33	122.81	123.79	101.32	121.79	96.15	97.35	79.77	111.49
135 to 139 pounds	192.00	164.95	175.44	172.33	145.37	166.67	121.79	115.04	112.54	142.30
140 to 144 pounds	104.00	134.02	122.81	123.79	127.75	147.44	147.44	141.60	129.62	130.06
145 to 149 pounds	104.00	134.02	52.63	143.20	149.78	108.97	115.38	106.20	136.75	129.58
150 to 154 pounds	64.00	72.17	105.26	109.22	123.35	96.15	134.62	132.74	115.38	110.50
155 to 159 pounds	32.00	51.55	17.54	77.67	114.54	64.10	96.15	150.44	89.74	84.60
160 to 164 pounds	8.00	.....	87.72	48.54	48.46	89.74	96.15	53.10	61.25	56.23
165 to 169 pounds	.....	10.31	35.09	26.70	35.24	51.28	76.92	61.95	58.40	44.01
170 to 174 pounds	.....	.....	17.54	21.84	22.03	19.23	6.41	35.40	32.76	22.49
175 to 179 pounds	.....	10.31	35.09	9.71	17.62	12.82	32.05	17.70	34.19	21.52
180 pounds and over	.....	.....	17.54	12.14	17.62	12.82	32.05	35.40	71.23	34.72
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

The average weight of recruits was 144.20 pounds; of the white troops 55.11 per cent weighed 140 pounds or over, and 1.21 per cent weighed less than the minimum, 120 pounds, as compared with 55.89 and 1.8 for 1911. Of the colored troops, 63.37 per cent weighed 140 pounds or over, while 0.39 per cent weighed less than the minimum, 120 pounds, compared with 70.48 and 0.68 for 1911.

The next tables show separately for each race the chest measurement of accepted recruits, and the proportion of each measurement per 1,000; also the chest measurement in relation to age in both absolute and proportional numbers.

TABLE No. 55.—*Relation of chest measurement to age.*

ABSOLUTE NUMBERS—WHITE RECRUITS YEAR 1912.

Chest measurement.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
30 inches and under	92	29	16	90	26	14	30	16	131	444
31 inches	257	136	62	395	144	59	85	68	369	1,575
32 inches	664	336	136	1,278	462	241	271	210	1,075	4,673
33 inches	508	309	175	1,637	641	376	411	333	1,537	5,927
34 inches	296	189	100	1,336	567	408	412	310	1,815	5,433
35 inches	116	92	67	811	401	265	319	239	1,432	3,742
36 inches	45	41	35	401	199	144	163	141	1,016	2,185
37 inches	4	12	7	127	77	64	73	59	575	998
38 inches	6	3	1	30	31	23	23	29	353	499
39 inches and over	1	1	1	13	7	10	21	16	406	476
Total	1,989	1,148	600	6,118	2,555	1,604	1,808	1,421	8,709	25,952

PROPORTIONAL NUMBERS—WHITE RECRUITS YEAR 1912.

30 inches and under	46.25	25.26	26.67	14.71	10.18	8.73	16.59	11.26	15.04	17.11
31 inches	129.20	118.48	103.33	64.57	56.36	36.78	47.01	47.85	42.37	60.69
32 inches	333.84	292.69	226.67	208.89	180.83	150.25	149.89	147.78	123.44	180.06
33 inches	255.40	269.16	291.67	267.57	250.88	234.41	227.32	234.34	176.49	228.38
34 inches	148.82	164.63	166.67	218.38	221.92	254.36	227.88	218.16	208.40	209.35
35 inches	58.32	80.14	111.67	132.56	156.95	165.22	176.44	168.19	164.43	144.19
36 inches	22.63	35.72	58.33	65.54	77.89	89.78	90.16	99.22	116.66	84.19
37 inches	2.01	10.45	11.67	20.76	30.14	39.90	40.38	41.52	66.03	38.46
38 inches	3.02	2.61	1.67	4.90	12.13	14.34	12.72	20.41	40.53	19.23
39 inches and over	.50	.87	1.67	2.12	2.74	6.23	11.62	11.26	46.62	18.34
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

TABLE No. 56.—*Relation of chest measurement to age.*

ABSOLUTE NUMBERS—COLORED RECRUITS YEAR 1912.

Chest measurement.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
30 inches and under	4	1	.....	7	2	.....	1	.....	8	23
31 inches	17	8	3	17	6	2	3	5	31	92
32 inches	44	38	14	64	33	31	23	8	85	340
33 inches	31	23	17	97	58	40	38	26	142	472
34 inches	18	15	10	121	54	31	35	30	144	458
35 inches	8	8	9	60	44	20	27	16	119	311
36 inches	2	3	4	32	22	20	18	17	81	199
37 inches	1	1	.....	8	7	10	5	7	42	81
38 inches	.....	.....	.....	3	1	2	4	3	25	38
39 inches and over	.....	.....	.....	3	.....	.....	2	1	25	31
Total	125	97	57	412	227	156	156	113	702	2,045

PROPORTIONAL NUMBERS—COLORED RECRUITS YEAR 1912.

30 inches and under	32.00	10.31	.....	16.99	8.81	.....	6.41	.....	11.40	11.25
31 inches	136.00	82.48	52.63	41.26	26.43	12.82	19.23	44.25	44.16	44.98
32 inches	352.00	391.75	245.61	155.33	145.37	198.72	147.44	70.80	121.07	166.25
33 inches	248.00	237.11	298.25	235.42	255.50	256.40	243.59	230.10	202.28	230.80
34 inches	144.00	154.64	175.44	293.69	237.88	198.72	224.36	265.50	205.13	223.95
35 inches	64.00	82.48	157.90	145.62	193.84	128.20	173.08	141.60	169.52	152.08
36 inches	16.00	30.93	70.18	77.67	96.92	128.20	115.38	150.44	115.38	97.32
37 inches	8.00	10.31	.....	19.42	30.84	64.10	32.05	61.95	59.83	39.61
38 inches	.....	.....	.....	7.28	4.41	12.82	25.64	26.55	35.61	18.58
39 inches and over	.....	.....	.....	7.28	.....	.....	12.82	8.85	35.61	15.16
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

The chest measurement of 54.67 per cent of the white recruits was 34 inches and over and 1.13 per cent were 30 inches and under, as compared with 49.47 and 1.94 per cent, respectively, for the preceding year. The chest measurements for colored recruits show 51.38 per cent 34 inches or over and 1.71 per cent 30 inches and under, as compared with 52.19 and 1.88 for 1911.

The following table shows the causes of rejection among white and colored troops examined for enlistment during the year 1912, with the ratios per 1,000 rejected:

TABLE No. 57.—*Causes of rejection by medical officers of the Army, of candidates examined for enlistment, year 1912.*

Causes of rejection.	Total.		White.						Colored.	
			Native born.		Foreign born.		Total.			
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Venereal diseases	387	97.73	318	100.44	22	42.86	340	92.39	47	167.86
Heart disease	375	94.70	309	97.60	41	79.77	350	95.11	25	89.29
Defects of hearing	340	85.86	283	89.39	45	87.55	328	89.13	12	42.86
Defects of vision	331	83.58	275	86.86	38	73.93	313	85.05	18	64.29
Flat feet	219	55.30	170	53.70	36	70.04	206	55.98	13	46.43
Underweight	130	32.83	115	36.32	7	13.62	122	33.15	8	28.57
Diseases of the genito-urinary system	106	26.77	95	30.01	6	11.67	101	27.45	5	17.86
Hernia	102	25.76	79	24.95	10	19.46	89	24.18	13	46.43
Tuberculosis	101	25.51	96	30.32	2	3.89	98	26.63	3	10.71
Alcoholism	101	25.51	92	29.06	5	9.73	97	26.36	4	14.29
Defective teeth	96	24.24	72	22.74	16	31.13	88	23.91	8	28.57
Diseases of the respiratory system	87	21.97	70	22.11	13	25.29	83	22.55	4	14.29
Diseases of the organs of locomotion	82	20.71	63	19.90	12	23.35	75	20.38	7	25.00
Defects of development	80	20.20	62	19.58	10	19.46	72	19.57	8	28.57
Diseases of the skin	74	18.69	61	19.27	6	11.67	67	18.21	7	25.00
Diseases of the nervous system	66	16.67	56	17.69	7	13.62	63	17.12	3	10.71
Chest development insufficient	61	15.40	52	16.42	3	5.84	55	14.94	6	21.43
Varicose veins	55	13.89	44	13.90	8	15.56	52	14.13	3	10.71
Curvature of the spine	47	11.87	39	12.32	1	1.95	40	10.87	7	25.00
General diseases	43	10.86	37	11.69	5	9.73	42	11.41	1	3.57
Weakness of mind	42	10.61	36	11.37	4	7.78	40	10.87	2	7.14
Hemorrhoids	42	10.61	31	9.79	3	5.84	34	9.24	8	28.57
Diseases of the digestive system	31	7.83	26	8.21	1	1.95	27	7.34	4	14.29
Diseases of the circulatory system	21	5.30	19	6.00	1	1.95	20	5.43	1	3.57
Varicocele	16	4.04	14	4.42	1	1.95	15	4.08	1	3.57
Overweight and obesity	13	3.28	9	2.84	3	5.84	12	3.26	1	3.57
Under height	12	3.03	10	3.16	1	1.95	11	2.99	1	3.57
Physical debility	5	1.26	5	1.58	....	.....	5	1.36	....	.....
Over height	2	.51	2	.63	....	.....	2	.54	....	.....
Injuries	127	32.07	108	34.11	10	19.46	118	32.07	9	32.14
Rejected for causes, physical and mental	3,194	806.57	2,648	836.39	317	616.73	2,965	805.71	229	817.86
Rejected for causes not physical	766	193.43	518	163.61	197	383.27	715	194.29	51	182.14
Total rejected	3,960	1,000.00	3,166	1,000.00	514	1,000.00	3,680	1,000.00	280	1,000.00

This year as last the diseases causing the greatest number of rejections were as follows in the order named: Venereal diseases, heart disease, defective hearing, defective vision, and flat feet. The number per 1,000 rejected for the last four causes was about the same in 1912 as in 1911. Venereal diseases, which caused the largest proportion of rejections, was lower than 1911, being in 1912, 97.73 as compared with 111.67 in 1911. In the white race, venereal diseases caused the second highest number of rejections, being 92.39 per 1,000, while heart disease caused 95.11. In the colored race, however, the rate for venereal diseases was 167.86 per 1,000. This was lower, however, than in 1911, when it was 221.65.

* * * * * * *

CONCLUSION.

This report is the last which will be signed by the present Surgeon General, on account of his retirement for age during the current fiscal year, after an incumbency of five years four and one-half months. It seems advisable, therefore, that a brief summary be made of the work done by the Medical Department and of the results obtained under his administration.

1. Typhoid fever, the most formidable of all camp diseases in the past, has apparently practically ceased to be a cause of noneffectiveness in our Army. This as is well known is the brilliant result of the immunization of our Army against this disease by the typhoid prophylactic. It was demonstrated in the maneuver camp at San Antonio in 1911 that it was entirely practicable to immunize a division upon mobilization without materially interfering with the military duties. The same can be done for any number of divisions. Thus if at any time it becomes necessary to mobilize a large army of militia and volunteers they can be properly protected against this disease in a short time after arrival in camp.

The first steps in this campaign were inaugurated by my predecessor, Gen. O'Reilly, in the latter part of 1908, and has been conducted to the present stage by the Medical Corps during my incumbency. I consider that, among the sanitary achievements of the Medical Department in preventive medicine, this measure for the prevention of this disease ranks second in importance only to the discovery of the method of transmission of yellow fever.

2. It appears, as stated elsewhere in this report, that at last effective measures have been instituted to control the occurrence of venereal diseases. Practically the first note of this campaign was sounded in a circular letter from this office January 25, 1909. Since that time a vigorous campaign has been conducted, interest throughout the Medical Department and the Army at large has been aroused. The War Department was finally persuaded to take official action in 1912, and Congress, at the suggestion of this office, passed the act for the stoppage of pay in 1912. The statistics for the year 1912 and for the first six months of 1913 show that the results obtained are eminently satisfactory and would indicate that we may hope for still more satisfactory results in the future. Great credit is due to certain enthusiastic medical officers for especially good work done during this campaign.

3. Prior to the year 1910 among the native troops in the Philippine Islands, beriberi each year caused a large number of admissions to sick report and much noneffectiveness. This disease was also responsible for the greatest number of deaths, and was second only to tuberculosis as a cause for discharge for disability. Experiments conducted by several observers, and confirmed by the board for the study of tropical diseases in the Philippine Islands, showed that beriberi occurred among peoples subsisting largely on highly-milled rice. As a result of recommendations by the board, orders were issued by the division commander and later by the War Department prescribing that only unpolished rice be issued and that a legume be added to the ration. Following the change in the ration beriberi has practically disappeared from among these troops. Only three cases occurred in 1911 and two in 1912.

4. As the result of constantly improving sanitary measures, the constantly noneffective and admission rates have steadily declined since the Spanish-American War. During the last few years as the result of the antityphoid and venereal campaigns these rates have decreased more rapidly, and in 1912 were the most satisfactory on record. This year, 1913, bids fair to eclipse all records and it would seem at the present time that these rates this year would reach an almost irreducible minimum.

5. Camp sanitation has been improved, simplified, and rendered inexpensive. It is being demonstrated each day that troops properly protected against typhoid fever and smallpox can live in camps suitably located, with the present method of camp sanitation, for an indefinite length of time with no increase in morbidity or mortality.

6. The mobilization of the maneuver division at San Antonio in 1911, first brought into evidence the remarkable progress which has been made by the Medical Department in organization since the Spanish-American War. There for the first time a division appeared with a complete modern sanitary organization and with its full quota of field hospitals and ambulance companies in addition to the regimental medical service. The full-field medical equipment was on the field before all of the troops had arrived.

7. The act of Congress of April 23, 1908, reorganizing the Medical Corps authorized the Medical Reserve Corps. The enrollment of civilian physicians in this corps, begun by my predecessor, has been continued during my administration. On June 30, 1913, there were enrolled in this corps 105 physicians on the active list and 1,100 on the inactive list. Included in this list are many of the most prominent medical men in this country. When the division was mobilized, at San Antonio in 1911, it was found that in nearly every instance it was necessary to leave a medical officer at each post to care for the sick left behind. It was then decided that a reserve corps commission should be issued to some civilian physician in the immediate vicinity of each post who could be called in in an emergency at any time. It is now practicable to order all medical officers on duty at the posts at once into the field, the sick remaining being cared for by the Medical Reserve Corps officers.

It was demonstrated that this plan is very satisfactory when the Second Division was mobilized at Texas City and Galveston in February, 1913.

8. An act of Congress of March 3, 1911, which had been proposed by this office, reorganized the Dental Corps of the Army. This corps when filled will furnish a sufficient number of dentists to perform fairly satisfactorily the dental work required in the Army.

9. The Army appropriation bill for the fiscal year ended June 30, 1911, partially reorganized the Army Nurse Corps. The pay was increased. The favorable influence of this legislation was soon shown, for on June 1, 1910, even before the increase in pay became effective, the corps was filled to its maximum strength of 100, which had not been done before since August 1, 1907. The number was increased July 1, 1911, to 125, and the last Army appropriation bill increased this number to 150. There are now in the service over 130.

* * * * * * *

Very respectfully,

GEO. H. TORNEY,
Surgeon General, U. S. Army.

The SECRETARY OF WAR.

REPORT OF THE CHIEF OF ENGINEERS.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, August 11, 1913.

From: The Chief of Engineers.
To: The Secretary of War.
Subject: Annual Report.

I present for your information the following report upon the duties and operations of the Engineer Department for the fiscal year ending June 30, 1913.

OFFICERS OF THE CORPS OF ENGINEERS.

The number of officers holding commissions in the Corps of Engineers at the end of the fiscal year was 201, a net increase during the year of seven.

Since July 1, 1912, the Corps of Engineers has lost three of its officers—Capt. Charles T. Leeds, who was retired from active service on account of disability incident thereto, under the provisions of section 1251, Revised Statutes; Lieut. Col. Graham D. Fitch, who was retired from active service upon his own request, on October 11, 1912, under the provisions of section 1243, Revised Statutes, after more than 34 years' service; and Capt. Edward M. Adams, who was retired from active service as a major, on February 27, 1913, under the provisions of an act of Congress approved October 1, 1890.

There were added to the Corps of Engineers during the fiscal year, by appointment from civil life, one probational second lieutenant, whose commission dates from March 3, 1913, for a period of one year, and by the assignment of nine second lieutenants, graduates of the United States Military Academy, whose commissions date from June 12, 1913.

On the 30th of June, 1913, the distribution of officers of Engineers, according to their duties, was as follows:

Chief of Engineers, in command of the Engineer Department, etc	1
Assistants to the Chief of Engineers	7
On duty in the office of the Chief of Engineers	2
River and harbor work and fortification work	19
River and harbor work, fortification work, The Board of Engineers, and department engineer, eastern department	1
River and harbor work, fortification work, The Board of Engineers, and lighthouse duty	1
River and harbor work and The Board of Engineers	1
River and harbor work and lighthouse duty	5
River and harbor work, fortification work, and lighthouse duty	5
River and harbor work, department engineer, central department, and lighthouse duty	1
River and harbor work, fortification work, and department engineer, southern department	1
River and harbor work, fortification work, department engineer, western department, and lighthouse duty	1
River and harbor work	26
River and harbor work, fortification work, and preparing plans for defense of Panama Canal	1
River and harbor work and Fort Riley Military Reservation	1
River and harbor work, fortification work, department engineer, Hawaiian department, and lighthouse duty	1
River and harbor work, and Vicksburg Military Park	1

River and harbor work, fortification work, and assistant department engineer, western department	1
River and harbor work, fortification work, and assistant department engineer, Hawaiian department	1
Fortification work and department engineer, Philippine department	1
Fortification work, Philippine Islands	1
On duty with and under the Panama Canal Commission	11
On duty with the General Staff Corps	2
With the government of the District of Columbia	3
On duty at the Army War College	2
Public buildings and grounds, District of Columbia	1
On duty at the service schools, Fort Leavenworth, Kans	3
At Engineer School, Washington Barracks, D. C., and with troops stationed there	18
On duty with troops at For Leavenworth, Kans. (in Texas)	19
On duty with troops at Vancouver Barracks, Wash	3
On duty with troops in the Hawaiian Islands	3
On duty with troops in the Philippine Islands	11
On duty connected with militia affairs	2
On duty as military attaché, Tokyo, Japan	1
On duty at the Engineer Depot, Washington Barracks, D. C	1
On duty at the Army Field Engineer School, Fort Leavenworth, Kans	2
On duty with The Board of Engineers	1
On duty at the United States Military Academy	12
Improvement of the Yellowstone National Park	1
Superintendent of the State, War, and Navy Building	1
On special duty	1
On duty connected with the defenses of Panama Canal	1
Under instruction at the Engineer School, Washington Barracks, D. C	8
Road work in Alaska	1
Aeronautical duty	1
On leave of absence	4
On graduating leave of absence	9
	201

The above table shows that out of a total of 201 officers only 72, or approximately 36 per cent, were on duty wholly under the control of the Chief of Engineers; 38, or 19 per cent, more were performing some duty under the control of the Chief of Engineers while at the same time performing other duties under various other branches of the Government; while 77, or 38 per cent, of the entire corps were on duty entirely detached from the control and supervision of the Chief of Engineers; in addition four were on leave of absence and nine were on graduation leave from the United States Military Academy.

With regard to the character of the duties performed, 50 officers were engaged on nonmilitary duty exclusively, 92 on military duty exclusively, while 44 were performing both military and nonmilitary duty. The diversified character of the duties assigned to the Corps of Engineers is well shown by this table.

An increase in the Corps of Engineers was provided for by Congress in section 5 of the river and harbor act approved February 27, 1911.

Under the provisions of this act of Congress 12 original vacancies were immediately created, and 12 additional vacancies were created on February 27 of each of the two subsequent years, so that the authorized strength of the Corps of Engineers is now 224 officers. Since the assignment to the Corps of Engineers of the cadets graduating in the fiscal year 1913 there remain 23 vacancies in the grade of second lieutenant, which, under the provisions of the law quoted above, may be filled from civil life.

ENGINEER TROOPS.

Under the provisions of section 11 of the act of February 2, 1901, the enlisted force of the Corps of Engineers consists of one band and three battalions of Engineers, each battalion consisting of one sergeant major, one quartermaster sergeant, and four companies, each company having a maximum authorized strength of 164 enlisted men.

At the present time the band, the First and Second Battalions, and one company of the Third Battalion are stationed within the continental limits of the United States, the headquarters and three companies of the Third Battalion being on foreign service.

The Engineer troops required to provide the present tactical organization of the mobile Army within the continental limits of the United States, with its proper complement of Engineers, in accordance with the provisions of Field Service Regulations, 1910, are as shown in the following table:

Unit.	Engineers required.
Cavalry Division	1 battalion (mounted) of 3 companies.
First Division	1 battalion of 3 companies.
Second Division	Do.
Third Division	Do.
Field Army	Do.

As there are, as indicated above, only nine companies of Engineers at present available within the continental limits of the United States and as none of these are mounted, it would appear that the necessary steps should be taken to provide as soon as possible, first, a mounted battalion of Engineers for the Cavalry Division, and, second, the three additional companies required for the three divisional and one field Army battalions, providing at the same time for the reorganization of the existing Engineer battalions into battalions of three companies each.

It is accordingly recommended that effort be made to secure the legislation necessary to provide for the increased number of Engineer troops required and permit of the reorganization indicated above.

In this connection attention is invited to the recommendations made in the annual reports of the Chief of Engineers for the past five years regarding the establishment of certain higher grades of noncommissioned officers in the Corps of Engineers, comparable to those in certain other branches of the service, and this recommendation is renewed. The highly technical nature of certain of the duties devolving on noncommissioned officers of Engineers in the field demand a high grade of enlisted men and should be provided for by adequate rank and compensation.

Attention is also invited to the recommendations contained in annual reports of prior years for an increase in the number of cooks in an Engineer company, and also for the change in the designation of the present grade of "private second class" to that of "private." These recommendations are renewed.

THE BOARD OF ENGINEERS.

The regulations for the government of the Corps of Engineers provide for a board of engineers, consisting of not less than three

officers designated by the Chief of Engineers, with the sanction of the Secretary of War. This board acts in an advisory capacity to the Chief of Engineers upon important questions of engineering. One of its principal duties is to plan or revise the projects for permanent fortifications of the United States.

The following changes have taken place in the personnel of the board since the date of the last annual report: Capt. F. A. Pope, Corps of Engineers, relieved Capt. E. M. Adams, Corps of Engineers, as recorder and disbursing officer, on December 28, 1912; Col. Frederic V. Abbot, Corps of Engineers, was detailed a member on June 13, 1913, vice Col. William T. Rossell, Corps of Engineers, relieved.

As at present constituted The Board of Engineers is composed of Col. W. M. Black, Corps of Engineers; Col. S. W. Roessler, Corps of Engineers: Col. Frederic V. Abbot, Corps of Engineers; Lieut. Col. E. B. Babbitt, Ordnance Department; Capt. Francis A. Pope, Corps of Engineers, recorder and disbursing officer.

In addition, division engineers in whose divisions there are fortifications are members of The Board of Engineers when matters pertaining to defensive works in their respective divisions are under consideration by the board.

During the fiscal year the board has reported upon various subjects connected with fortification work.

FORTIFICATIONS IN THE UNITED STATES.

The scheme of national defense upon which work was in progress between 1888 and 1906 was based primarily upon a report submitted January 16, 1886, by the "Board on Fortifications or Other Defenses," commonly designated the Endicott Board. On January 31, 1905, the President organized a board, with the Secretary of War, Hon. W. H. Taft, as president, to review the projects for the United States and for the insular possessions, to indicate the localities where defenses were most urgently needed, and to determine the character and general extent of the defenses, with their estimated cost. This board is known as the National Coast Defense Board. The board submitted its final report February 1, 1906.

Permanent seacoast defenses have been installed at the following localities in the United States:

1. Kennebec River, Me.
2. Portland, Me.
3. Portsmouth, N. H.
4. Boston, Mass.
5. New Bedford, Mass.
6. Narragansett Bay, R. I.
7. Eastern entrance to Long Island Sound.
8. New York, N. Y.
9. Delaware River.
10. Baltimore, Md.
11. Washington, D. C.
12. Hampton Roads, Va.
13. Cape Fear River, N. C.
14. Charleston, S. C.
15. Port Royal, S. C.
16. Savannah, Ga.
17. Key West, Fla.
18. Tampa Bay, Fla.
19. Pensacola, Fla.
20. Mobile, Ala.
21. New Orleans, La.
22. Galveston, Tex.
23. San Diego, Cal.
24. San Francisco, Cal.
25. Columbia River, Oreg. and Wash.
26. Puget Sound, Wash.

In accordance with the report of the board above mentioned additional defenses are to be constructed at some of these points and also

at the entrance to Chesapeake Bay and at Los Angeles, Cal., as funds are provided by Congress.

While the National Coast Defense Board scheme was, in general, sufficient to meet the defensive requirements of our seacoast, these requirements may be subject to change to meet changes in military conditions and in commercial and naval vessels. This scheme carried an estimate amounting to $10,836,400 for emplacement construction (not including electric light or power or land for sites). Appropriations to date, since the submission of the report of the board, aggregate $405,064.

Appropriations for construction of gun and mortar batteries have been made as follows:

Act of—		Act of—	
Aug. 18, 1890	$1,221,000.00	May 7, 1898	$3,000,000.00
Feb. 24, 1891	750,000.00	July 7, 1898	2,526,000.00
July 23, 1892	500,000.00	Mar. 3, 1899	1,000,000.00
Feb. 18, 1893	50,000 00	May 25, 1900	2,000,000.00
Aug. 1, 1894	500,000.00	Mar. 1, 1901	1,615,000.00
Mar. 2, 1895	500,000.00	June 6, 1902	2,000,000.00
June 6, 1896	2,400,000.00	Mar. 3, 1903	2,236,425.00
Mar. 3, 1897	3,841,333.00	Apr. 21, 1904	700,000.00
Allotments from the appropriation for "National defense," act of Mar. 9, 1898	3,827,842.80	May 27, 1908	300,000.00
		Mar. 3, 1909	5,064.00
		Feb. 13, 1913	100,000.00
		Total	29,108,664.80

Preparations are now being made for the additional work authorized by the last fortification act, and, with a view to continuing this work, an estimate of $250,000 is submitted.

Modernizing older emplacements.—Much remains to be done to place the older batteries in satisfactory condition for most efficient operation, including the altering of projectile hoists to meet present requirements, widening loading platforms, platform lighting, etc.

The fortification appropriation act approved February 13, 1913, provided $25,000 for this purpose. Work under this appropriation is in progress.

For continuing the most urgently needed work under this head an estimate of $175,000 is submitted.

Appropriations for modernizing older emplacements have been made as follows:

Act of—	
Mar. 3, 1905	$450,000.00
June 25, 1906	150,000.00
Mar. 2, 1907	100,000.00
May 27, 1908 (new application of funds appropriated for pneumatic-dynamite batteries)	165,261.36
Mar. 3, 1909	100,000.00
Feb. 13, 1913	25,000.00
Total	990,261.36

Fire control at fortifications.—Such progress has been made during the fiscal year as funds assigned to the Engineer Department have permitted. This appropriation is distributed by the Secretary of War among the Engineer and Ordnance Departments and the Signal Corps for expenditure. No appropriation for this purpose was made in the last fortification act.

Prior to 1905 appropriations for this work, so far as performed by the Engineer Department, were made under the title "Installation of range and position finders," as follows:

Act of—	
July 7, 1898	$150,000
May 25, 1900	150,000
Mar. 1, 1901	150,000
June 6, 1902	325,000
Mar. 3, 1903	223,500
Apr. 21, 1904	225,000
Total	1,223,500

Later appropriations have been made, under the title "Fire control at fortifications," applicable to the work of the Engineer and Ordnance Departments and the Signal Corps. The amounts appropriated and the portions thereof assigned to the Engineer Department are as follows:

Act of—	Appropriated.	Assigned to Engineer Department.	Act of—	Appropriated.	Assigned to Engineer Department.
Mar. 3, 1905	$1,000,000.00	$590,000.00	June 23, 1910	$200,000.00	$102,772.89
June 25, 1906	700,000.00	217,631.37	Mar. 4, 1911	100,000.00	
Mar. 2, 1907	900,000.00	432,784.81	June 6, 1912	100,000.00	
May 27, 1908	270,256.00	120,456.00			
Mar. 3, 1909	247,055.00	211,555.00	Total	3,517,311.00	1,684,200.07

Electrical installations.—The National Coast Defense Board estimated that $5,216,031 would be required to furnish the necessary electrical equipment for the defenses of the United States in addition to the current required for searchlights.

Funds have been provided by Congress for this purpose as follows:

Act of—	
May 27, 1908	$348,888
Mar. 3, 1909	100,000
Mar. 4, 1911	50,000
Feb. 13, 1913	50,000
Total	548,888

The funds provided in the act of February 13, 1913, are being applied to the purchase and installation of a few generating sets where most needed.

For continuing the installation of this equipment at the defenses where they are considered to be most needed an estimate of $60,000 is submitted.

Searchlights.—The procurement and installation of searchlight equipment has been continued during the past fiscal year. The act of February 13, 1913, has provided $100,000 for this purpose, and this amount will all be required for expenditure during the present year.

To carry on the work of installation an estimate of $200,000 is submitted.

Appropriations for searchlights have been made as follows:

Act of—	
Mar. 1, 1901 (New York Harbor)	$150,000
June 6, 1902	150,000
Mar. 3, 1903	150,000
Apr. 21, 1904	150,000
Mar. 3, 1905	200,000
June 25, 1906	125,000
Mar. 2, 1907	210,000
May 27, 1908	210,000
Mar. 3, 1909	210,000
June 23, 1910	50,000
Mar. 4, 1911	50,000
June 6, 1912 (reappropriated from balances of other funds)	25,000
Feb. 13, 1913	100,000
Total	1,780,000

Sites for fortifications.—The fortification act approved February 13, 1913, provided $100,000 for this purpose, it being the intention that this amount, with a balance of $50,000 from previous appropriations, would be applied to the acquisition of land at Cape Henry, Va. Negotiations for the acquisition of this land have been in progress, but the offers received from the owners of the land required have been largely in excess of the amount available. No further operations under this appropriation have accordingly been conducted, beyond negotiations for a few small parcels of ground, required for appurtenances to fortifications.

Appropriations for sites for fortifications have been made as follows:

Act of—		Act of—	
Aug. 18, 1890	$500,000	Mar. 1, 1901	$200,000
Feb. 24, 1891	500,000	June 6, 1902	200,000
July 23, 1892	500,000	Mar. 3, 1903	200,000
Feb. 18, 1893	175,000	Apr. 21, 1904	100,000
Aug. 1, 1894	150,000	May 27, 1908	121,048
June 6, 1896	500,000	Mar. 3, 1909	250,000
Mar. 3, 1897	300,000	Feb. 13, 1913	100,000
May 7, 1898	300,000		
Mar. 3, 1899	300,000	Total	4,596,048
May 25, 1900	200,000		

Preservation and repair of fortifications.—The modern defenses now existing represent an expenditure of approximately $29,000,000 for battery construction alone. These extensive works contain much costly machinery and ordnance material, and must be kept properly painted and repaired to be effective when needed. The sum of $200,000 was provided for this purpose in the fortification act of February 13, 1913, and this amount is only sufficient for absolutely necessary work of maintenance and for a very few smaller items of repair. Much desirable and necessary work is now awaiting future appropriations.

An estimate of $200,000 for preservation and repair is submitted, and it is strongly recommended (in the interest of economy and efficient service) that this amount be appropriated.

Appropriations for preservation and repair of fortifications have been made as follows:

Act of—		Act of—	
Sept. 22, 1888	$100,000	Mar. 3, 1903	$300,000
Mar. 2, 1889	100,000	Apr. 21, 1904	300,000
Aug. 18, 1890	80,000	Mar. 3, 1905	300,000
Feb. 24, 1891	80,000	June 25, 1906	200,000
July 23, 1892	60,000	Mar. 2, 1907	200,000
Feb. 18, 1893	45,000	May 27, 1908	225,000
Aug. 1, 1894	45,000	Mar. 3, 1909	225,000
Mar. 2, 1895	45,000	June 23, 1910	300,000
June 6, 1896	50,000	Mar. 4, 1911	300,000
Mar. 3, 1897	100,000	June 6, 1912 (including $125,000 reappropriated from balances of other funds)	300,000
May 7, 1898	100,000	Feb. 13, 1913	200,000
Mar. 3, 1899	100,000		
May 25, 1900	100,000	Total	4,258,000
Mar. 1, 1901	100,000		
Feb. 14, 1902	3,000		
June 6, 1902	300,000		

Plans for fortifications.—Funds appropriated for this purpose are expended in the preparation or revision of projects and plans of works for the permanent fortification of the United States.

This work is one of the principal duties of the Board of Engineers. Beginning with the act of March 2, 1889, an appropriation of $5,000 for the work has been carried in each fortification appropriation act, and an estimate of this amount is submitted this year.

Supplies for seacoast defenses.—This appropriation is designed for the maintenance and repair of searchlights and electric light and power equipment for seacoast fortifications, and for tools, electrical and other supplies and appliances to be used in their operation.

The act of February 13, 1913, appropriated $40,000 for this purpose.

As the earlier electric plants become worn with use, and as additional plants and electrical and searchlight apparatus are installed from time to time, the demands upon the funds for the purchase of these supplies increase.

The sum of $40,000 is estimated as necessary for the procurement of the regular electrical supplies for the next fiscal year.

A satisfactory form of reserve electric lantern has been produced as the result of exhaustive tests. To supply these lanterns in sufficient quantities to all batteries in service an estimate of $19,500 was originally submitted. Of this amount the sum of $10,000 was appropriated in the act of March 3, 1909, and under this appropriation lights have been purchased and issued to the fortifications so far as the funds available would permit. It is proposed, with the approval of Congress, to complete the procurement of these lanterns as funds from the general appropriation for "Supplies for seacoast defenses" will permit without asking a special appropriation, and the estimates submitted this year contain recommended legislation permitting this.

Appropriations for supplies for seacoast defenses have been made as follows:

Act of—		Act of—	
May 25, 1900	$25,000	May 27, 1908	$44,500
Mar. 1, 1901	25,000	Mar. 3, 1909	40,000
June 6, 1902	25,000	June 23, 1910	45,000
Mar. 3, 1903	35,000	Mar. 4, 1911	45,000
Apr. 21, 1904	35,000	June 6, 1912	45,000
Mar. 3, 1905	40,000	Feb. 13, 1913	40,000
June 25, 1906	30,000		
Mar. 2, 1907	40,000	Total	514,500

Sea walls and embankments.—The large number of seacoast reservations renders necessary a considerable expenditure of funds to prevent the washing away of valuable land by the ordinary action of the waves and to repair damages done by occasional violent storms.

To provide for maintenance and necessary extensions of existing sea walls and such new sea walls as may be necessary, an estimate of $40,000 is submitted.

Appropriations for sea walls and embankments, exclusive of those for particular localities, have been made as follows:

Act of—		Act of—	
Sept. 22, 1888	$117,000	Mar. 3, 1905	$19,400
June 6, 1896	17,975	June 25, 1906	50,000
Mar. 3, 1897	33,000	Mar. 2, 1907	25,000
May 7, 1898	55,000	May 27, 1908	50,000
Mar. 3, 1899	2,500	Mar. 3, 1909	50,000
May 25, 1900	50,000	June 6, 1912 (reappropriated from balances of other funds)	25,000
Mar. 1, 1901	100,000		
June 6, 1902	100,000	Total	883,450
Mar. 3, 1903	89,575		
Apr. 21, 1904	99,000		

Repair and protection of defenses of Charleston, Pensacola, Mobile, and New Orleans.—For repairs and sea walls at these localities, rendered necessary by storms, the following estimates were submitted to Congress in 1906:

Charleston, S. C., for the construction of the sea wall necessary for the protection of Fort Moultrie	$225,600
Pensacola, Fla., for building sea walls for the protection of the sites of the fortifications and of the necessary post buildings at Forts Pickens and McRee	907,100
Pensacola, Fla., for repair and restoration of batteries and other structures appurtenant to the defenses of Pensacola, and for retaining walls to protect the batteries from floods	109,355
Mobile, Ala., for repair and restoration of batteries and other structures appurtenant to the defenses of Mobile, and for rebuilding sea walls and groins for protection of the sites of the fortifications of garrison posts	1,089,500
New Orleans, La., for rebuilding and strengthening the levees for protection of the site of the defenses and the garrison post at Fort St. Philip	139,800

In 1907, 1908, and 1909 appropriations were made covering the estimates for Charleston, Mobile, and Pensacola. The work at Charleston and Mobile has been completed, and that at Pensacola practically completed.

In 1907 the sum of $100,000 was appropriated for the levees at Fort St. Philip. This amount was insufficient to protect the entire reservation and a portion thereof was abandoned to overflow, the most important portion being inclosed by levees. Provision for additional protection has been made by the Mississippi River Commission.

The appropriations for these items of work have been as follows:

Act of Mar. 2, 1907.	
Sea wall, Fort Moultrie, S. C	$100,000
Repair and protection of defenses of New Orleans, La	100,000
Repair and protection of defenses of Pensacola, Fla. (for sea wall)	400,000
Repair and protection of defenses of Pensacola, Fla. (for batteries, etc.)	50,000
Repair and protection of defenses of Mobile, Ala	500,000
Act of May 27, 1908:	
Sea wall, Fort Moultrie, S. C	125,600
Repair and protection of defenses of Pensacola, Fla. (for batteries, etc.)	59,355
Repair and protection of defenses of Mobile, Ala	589,500
Act of Mar. 3, 1909, repair and protection of defenses of Pensacola, Fla. (for sea walls)	507,100

Under the provisions of the fortification appropriation act of June 6, 1912, balances of these appropriations have been applied to other objects of expenditure, as follows:

Sea wall, Fort Moultrie, S. C	$8,992
Repair and protection of defenses of Pensacola, Fla.:	
For batteries, etc	1,008
For sea walls	40,000
Repair and protection of defenses of Mobile, Ala	96,000
	146,000

Sea walls, defenses of Galveston, Tex.—The defensive works at Galveston are unavoidably in most exposed positions, and the level of the lands surrounding the batteries was greatly lowered by the storm of September 8, 1900. Work of reconstruction and repair of the Galveston defenses is now completed under the appropriation of $992,000 contained in the fortification act approved March 1, 1901. With the funds so provided, and in accordance with the plans before Congress when that appropriation was made, each individual battery has been made secure against any similar storms which are likely to occur in the future.

For building a sea wall and filling up the reservation at Fort Crockett to a height above storm tides the sums of $591,046.25 and $158,953.75 were appropriated in the sundry civil appropriation acts of April 28, 1904, and June 30, 1906, aggregating $750,000. The retaining wall in the rear of the reservation has been undermined by washouts, permitting portions of the fill to escape. With a view to remedying this condition it is contemplated to provide for an extension upon private land of the fill at the adopted grade of 2 per cent until it intersects the natural surface of the ground (the consent of the owners being first obtained); the estimated cost of this work is $88,000.

For a sea wall and fill at Fort Travis the sum of $440,000 was provided in the fortification appropriation act approved March 3, 1909. The work under this appropriation is approaching completion.

Under the provisions of the fortification appropriation act of June 6, 1912, a balance of $65,000 pertaining to this appropriation has been applied to other objects of expenditure.

Similar protection is required at Fort San Jacinto. Certain claims to portions of this reservation adverse to the title of the United States have during recent years operated to prevent any work of improvement upon the reservation. All valid claims adverse to the title of the United States have now, in the opinion of the Department of Justice, been extinguished, and the construction of a sea wall for the protection of the reservation can now be begun whenever funds therefor may be provided.

Repair and protection of the defenses of Key West, Fla.—On October 14, and again on October 17, 1910, severe hurricanes were experienced at Key West, Fla., the wind velocities reaching 60 and 105 miles per hour, respectively. The storms occasioned considerable damage to the defensive works at Key West, demolishing a number of fire-control structures, storehouses, etc., washing away the sand cover of certain batteries, and entirely destroying the approach to the wharf being constructed for the torpedo service and for landing vessels with supplies, etc., for the general use of the garrison. The repairs of these damages were provided for so far as practicable from funds appropriated for general maintenance work, but certain items of work, including principally the restoration of the wharf, required a special appropriation. The fortification appropriation act of June 6, 1912, provided $36,000 for this purpose. Work under this appropriation is approaching completion.

Preservation and repair of torpedo structures.—A large number of new torpedo-defense structures have been constructed.

Situated as they are at exposed locations on the Atlantic, Gulf, and Pacific coasts, the requirements for the maintenance of these structures are considerable. The act of February 13, 1913, provided $20,000 for this purpose. This sum is being applied to such minor repairs and maintenance as are found from time to time to be most urgently necessary. In view of the very large number of these structures and the necessity for frequent repairing and minor repairs to prevent marked deterioration in the buildings, the sum of $20,000 has not been sufficient during the past year for all necessary work, and an estimate of $30,000 is submitted this year.

Appropriations for preservation and repair of torpedo structures have been made as follows:

Act of—		Act of—	
June 25, 1906	$10,000	Mar. 4, 1911	$20,000
Mar. 2, 1907	10,000	June 6, 1912	20,000
May 27, 1908	15,000	Feb. 13, 1913	20,000
Mar. 3, 1909	20,000		
June 23, 1910	20,000	Total	135,000

Submarine mines.—Prior to the act of June 6, 1902, all work in connection with the submarine-mine defense was under the Engineer Department. This act assigned to the Artillery the purchase of torpedo material proper, leaving to the Engineer Department the erection of casemates, galleries, storehouses, and other necessary structures.

To provide additional structures which are necessary under existing projects, an estimate of $35,000 is submitted.

Appropriations for work under the Engineer Department, beginning with the act of June 6, 1902, have been as follows:

Act of—		Act of—	
June 6, 1902	$33,000	May 27, 1908	$175,000
Mar. 3, 1903	50,000	Mar. 3, 1909	100,000
Apr. 21, 1904	87,000	Mar. 4, 1911	50,000
Mar. 3, 1905	400,000		
June 25, 1906	175,000	Total	1,245,000
Mar. 2, 1907	175,000		

The following money statements show the condition on June 30, 1913, of all general appropriations under which operations were in progress in the United States at the close of the fiscal year:

"GUN AND MORTAR BATTERIES."

For battery construction.

July 1, 1912, balance unallotted		$11,974.80
Feb. 13, 1913, appropriated		100,000.00
		111,974.80
June 30, 1913, net allotments during fiscal year		4,314.33
July 1, 1913, balance unallotted		107,660.47
July 1, 1913, amount pledged		100,000.00
July 1, 1913, amount available for miscellaneous work		7,660.47

For modernizing older emplacements.

July 1, 1913, balance unallotted		$8,248.39
Feb. 13, 1913, appropriated		25,000.00
		33,248.39
July 30, 1913, net allotments during fiscal year		11,748.39
July 1, 1913, balance unallotted		21,500.00
July 1, 1913, amount pledged		19,588.00
July 1, 1913, balance available		1,912.00

"FIRE CONTROL AT FORTIFICATIONS."

July 1, 1912, balance unallotted		$1,367.09
June 30, 1913, net assignments to the Chief of Engineers during fiscal year		4,082.50
		5,449.59
June 30, 1913, net allotments during fiscal year		2,329.39
July 1, 1913, balance unallotted and available		3,120.20

"ELECTRICAL INSTALLATION AT SEACOAST FORTIFICATIONS."

July 1, 1912, balance unallotted		$2,394.05
Feb. 13, 1913, appropriated		50,000.00
		52,394.05
June 30, 1913, net allotments during fiscal year		5,524.66
July 1, 1913, balance unallotted		46,869.39
July 1, 1913, amount pledged		46,869.39

"SEARCHLIGHTS FOR HARBOR DEFENSES."

July 1, 1912, balance unallotted	$29,530.47
Feb. 13, 1913, appropriated	100,000.00
	129,530.47
June 30, 1913, net amount returned from allotments during fiscal year	17,012.32
July 1, 1913, balance unallotted	146,542.79
July 1, 1913, amount pledged	146,542.79

"SITES FOR FORTIFICATIONS AND SEACOAST DEFENSES."

July 1, 1912, balance unallotted	$76,685.52
Feb. 13, 1913, appropriated	100,000.00
	176,685.52
June 30, 1913, net allotments during fiscal year	8,487.88
July 1, 1913, balance unallotted	168,197.64
July 1, 1913, amount pledged	150,000.00
July 1, 1913, balance available	18,197.64

"PRESERVATION AND REPAIR OF FORTIFICATIONS."

July 1, 1912, balance unallotted	$311,827.56
Feb. 13, 1913, appropriated	200,000.00
	511,827.56
June 30, 1913, net allotments during fiscal year	477,703.81
July 1, 1913, balance unallotted	34,123.75
July 1, 1913, amount pledged	9,398.08
July 1, 1913, balance available	24,725.67

"PLANS FOR FORTIFICATIONS."

July 1, 1912, balance unallotted	$5,000.00
Feb. 13, 1913, appropriated	5,000.00
	10,000.00
June 30, 1913, net allotments during fiscal year	10,000.00

"SUPPLIES FOR SEACOAST DEFENSES."

July 1, 1912, balance unallotted	$46,637.45
Feb. 13, 1913, appropriated	40,000.00
	86,637.45
June 30, 1913, net allotments during fiscal year	33,670.86
July 1, 1913, balance unallotted	52,966.59
July 1, 1913, amount pledged	52,966.59

"SEA WALLS AND EMBANKMENTS."

July 1, 1912, balance unallotted	$32,026.51
June 30, 1913, net allotments during fiscal year	30,178.75
July 1, 1913, balance unallotted and available	1,847.76

"PRESERVATION AND REPAIR OF TORPEDO STRUCTURES."

July 1, 1912, balance unallotted	$20,000.00
Feb. 13, 1913, appropriated	20,000.00
	40,000.00
June 30, 1913, net allotments during fiscal year	39,333.04
July 1, 1913, balance unallotted	666.96
July 1, 1913, amount pledged	666.96

"CASEMATES, GALLERIES, ETC., FOR SUBMARINE MINES."

July 1, 1912, balance unallotted	$5,976.76
June 30, 1913, net allotments during fiscal year	242.08
July 1, 1913, balance unallotted	5,734.68
July 1, 1913, amount pledged	5,734.68

Estimates of appropriations required for 1914–15 for fortifications in the United States.

Gun and mortar batteries:	
Construction of gun and mortar batteries	$250,000.00
Modernizing older emplacements	175,000.00
Electrical installations at seacoast fortifications	60,000.00
Searchlights for harbor defenses	200,000.00
Preservation and repair of fortifications	200,000.00
Plans for fortifications	5,000.00
Supplies for seacoast defenses	40,000.00
Sea walls and embankments	40,000.00
Preservation and repair of torpedo structures	30,000.00
Casemates, galleries, etc., for submarine mines	35,000.00
	1,035,000.00

FORTIFICATIONS IN INSULAR POSSESSIONS.

Batteries.—The first appropriation for this purpose was contained in the fortification act approved April 21, 1904, and additional appropriations have been made in each of the succeeding years, the aggregate amount appropriated to date being $8,910,200 (including $250,000, the expenditure of which was assigned to the Chief of Ordnance). With these appropriations batteries have been constructed at Guantanamo Bay, Cuba, and construction work is still in progress at Honolulu and Pearl Harbor, Hawaii, and Manila and Subic Bays, Philippine Islands.

An estimate of $300,000 is submitted, to permit the continuation of work in the Philippine Islands.

Appropriations for this work have been made as follows:

Act of—	Generally applicable.	Hawaiian Islands.	Philippine Islands.	Act of—	Generally applicable.	Hawaiian Islands.	Philippine Islands.
Apr. 21, 1904	$700,000	.....	.....	June 23, 1910	.....	.....	$800,000
Mar. 3, 1905	700,000	.....	.....	Mar. 4, 1911	.....	$150,000	1,169,000
June 25, 1906	.....	$260,000	.....	June 6, 1912	.....	170,000	800,000
Mar. 2, 1907	.....	200,000	$500,000	Feb. 13, 1913	.....	70,000	700,000
May 27, 1908	.....	400,000	954,000				
Mar. 3, 1909	.....	337,200	[1] 1,000,000	Total...	$1,400,000	1,587,200	[1] 5,923,000

[1] Including $250,000, the expenditure of which was assigned to the Chief of Ordnance.

Electrical installations.—The National Coast Defense Board estimated that $788,713 would be required to furnish the necessary electrical equipment for the defenses of the insular possessions, in addition to the current required for searchlights.

Toward the installation of this equipment the sum of $489,723 has thus far been provided by Congress, $68,938 for the Hawaiian Islands and $420,785 for the Philippine Islands. With the funds available electrical equipment is now being procured and installed. Operations under existing appropriations are in progress, and no additional funds will be required during the next fiscal year.

Appropriations for this work have been made as follows:

Act of—	Hawaiian Islands.	Philippine Islands.
May 27, 1908	$20,000	$115,000
Mar. 3, 1909	14,469	88,823
June 23, 1910	.....	45,000
Mar. 4, 1911	.....	171,962
Feb. 13, 1913	34,469	.....
Total	68,938	420,785

Searchlights.—To complete the installation of the searchlights covered by existing projects in the Hawaiian Islands and the Philippine Islands, appropriations of $10,800 and $20,600, respectively, were made by the last fortifications act. Work under these appropriations is in progress, and no additional estimate for this purpose is submitted.

Appropriations for this work have been made as follows:

Act of—	Generally applicable.	Hawaiian Islands.	Philippine Islands.
Mar. 2, 1907	$30,000	.....	.....
May 27, 1908	.....	$47,500	$180,000
Mar. 3, 1909	.....	66,000	.....
June 23, 1910	.....	.....	139,000
Mar. 4, 1911	.....	40,100	.....
Feb. 13, 1913	.....	10,800	20,600
Total	30,000	164,400	339,600

Procurement of sites.—All land at present required in the Philippine Islands has been acquired.

The acquisition of additional land in the Hawaiian Islands with the unexpended balance of the funds provided therefor in the fortifications appropriation act of June 25, 1906, is in progress.

Appropriations for this work have been as follows:

Act of—	Hawaiian Islands.	Philippine Islands
Apr. 21, 1904	$200,000	.....
June 25, 1906	150,000	.....
May 27, 1908	.....	$5,000
Mar. 3, 1909	.....	12,000
Total	350,000	17,000

Maintenance of fortifications.—A number of the batteries authorized by Congress for the insular possessions have been completed and are being operated by the troops. Repairs, painting, etc., are from time to time necessary. The approaching completion of work at certain localities and the exhaustion of construction funds render provision for such work necessary in the future. Estimates are accordingly submitted of $1,500 and $7,000 for this purpose for the defensive works in the Hawaiian Islands and the Philippine Islands, respectively. The $8,000 appropriated for this purpose in the Philippine Islands and the $500 in the Hawaiian Islands, by the act of February 13, 1913, will be applied, so far as the funds are available, to the most necessary work required during the fiscal year.

Appropriations for this work have been made as follows:

Act of—	Hawaiian Islands	Philippine Islands.
June 23, 1910		$7,000
Mar. 4, 1911		7,000
June 6, 1912	$500	8,000
Feb. 13, 1913	500	8,000
Total	1,000	30,000

Maintenance of torpedo structures.—In order to provide for the maintenance in proper condition of the numerous structures already erected in connection with torpedo defense, estimates of $2,000 and $1,000, respectively, have been submitted for the Hawaiian Islands and the Philippine Islands. For these purposes appropriations of $500 and $750, respectively, were made by the last fortifications act.

Appropriations for this work have been made as follows:

Act of—	Hawaiian Islands.	Philippine Islands.
June 23, 1910		$1,000
Mar. 4, 1911		1,000
June 6, 1912		500
Feb. 13, 1913	$500	750
Total	500	3,250

Electrical and other supplies.—Under appropriations heretofore made by Congress a number of electric plants and searchlights have been installed in the defensive works in the Hawaiian and Philippine Islands, and in order that the necessary supplies and materials may be furnished for their operation and maintenance, as for similar equipment in this country, estimates of $1,000 and $3,000, respectively, have been submitted. For work of this character in the Hawaiian and Philippine Islands $750 and $3,000, respectively, were provided by the act of February 13, 1913, with which the supplies most urgently required will be procured.

Appropriations for this work have been made as follows:

Act of—	Hawaiian Islands.	Philippine Islands.
June 23, 1910		$2,500
Mar. 4, 1911	$1,000	2,500
June 6, 1912	750	2,500
Feb. 13, 1913	750	3,000
Total	2,500	10,500

Torpedo structures.—For the construction of additional defenses of this character required in the Philippine Islands an estimate of $67,000 was submitted last year. For this purpose the sum of $50,000 was appropriated in the act of February 13, 1913.

Appropriations for this work have been made as follows:

Act of—	Generally applicable.	Philippine Islands.	Hawaiian Islands.
June 8, 1898 (for Manila Harbor)		$150,000	
Mar. 2, 1907	$200,000		
May 27, 1908			$129,000
Feb. 13, 1913		50,000	
Total	200,000	200,000	129,000

Land defenses.—For the construction of works of defense against landing parties in the Philippine Islands the sum of $180,000 was appropriated by the fortification appropriation act approved March 4, 1911. Work under this appropriation is in active progress and will shortly be completed.

For similar work in the Hawaiian Islands an estimate of $457,000 is submitted.

Reserve equipment.—An adequate reserve of spart parts, etc., for the fortifications and their appliances in the insular possessions is necessary on account of their remoteness from commercial sources of supply. For application to this purpose estimates of $50,000 and $100,000, respectively, are submitted for the Hawaiian and Philippine Islands.

Fire control.—No funds for this purpose were provided by the last fortification act.

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FORTIFICATIONS, ISTHMIAN CANAL.

The construction of these works is under the Isthmian Canal Commission, but plans for the various defensive works are being prepared by the Chief of Engineers, and substantial progress in their preparation has been made.

MILITARY STRUCTURES, PHILIPPINE ISLANDS.

The construction of a pumping plant, electric power plant, and certain Army storehouses for military purposes in the Philippine Islands has been assigned to the Engineer Department and funds

from various appropriations applied thereto. These funds are insufficient for the completion of the work.

For the completion of this work an estimate of $170,000 was submitted last year, but no funds were appropriated. At the close of the fiscal year portions of the work were approaching completion, but for lack of funds, which will soon be entirely exhausted, it will be impossible to fully complete any structure until an additional appropriation is made. A revised estimate for completing the work has been prepared, and it is now believed that $154,000 will be sufficient for this purpose. An estimate of this amount is submitted.

The following funds, in addition to those elsewhere accounted for in this report, have been assigned to the Engineer Department for application to this work:

Electric power plant, Corregidor Island, P. I. (sundry civil act of Mar. 4, 1911)	$154,667.00
Water and sewers at military posts, 1912 (Army act of Mar. 3, 1911)	15,500.00
Seacoast defenses, Philippine Islands and Hawaii (sundry civil acts)	16,155.55
Army storehouses, Corregidor Island, P. I. (Army act of Mar. 3, 1909)	132,443.66
Total	318,766.21

ENGINEER DEPOTS.

WASHINGTON BARRACKS.

This depot is the repository for part of the military bridge equipage of the Army; for miscellaneous military engineering tools, apparatus, supplies, and materials of all kinds; and for astronomical, surveying, drafting, and reconnoisance instruments and supplies used by the Army and by officers of the Corps of Engineers on public works, both military and civil. It purchases and issues military engineering tools and supplies and serves particularly as an exchange for engineering instruments of all kinds, receiving them from the Army or public works, caring for them while in store, making the necessary repairs, reissuing them when required, and, so far as appropriations will permit, making purchases of such items as can not be supplied from store.

Numerous shipments have been made during the year. A large number of instruments have been repaired in the instrument-repair shop. All new instruments were examined and tested there.

A new building for depot shops and trade schools is urgently needed, the estimated cost being $22,000. This work is included in the estimates for buildings for the Engineer post and school at Washington Barracks.

With the $15,000 appropriated in the last Army act for "Ponton shed, Washington Barracks, D. C.," the construction of ponton shed No. 3 has been undertaken.

FORT LEAVENWORTH.

This depot is the repository for part of the military bridge equipage of the Army, as well as tools, stores, and miscellaneous supplies. The general work of the office and storehouse comprised the care of property on hand, the purchase of supplies, the repair of instruments,

issues to the battalion of Engineers there stationed, and the keeping of the depot accounts and records.

Work in the shops during the year has included the fabrication and repair of ponton equipage so far as practicable, until February 24, 1913, since which date no work has been done, all troops being in the field.

Electric lighting of shops and storehouse by the Quartermaster Corps is in progress.

Among the needs of this depot are the construction of two additional ponton sheds and new power equipment for the shops.

VANCOUVER BARRACKS.

This depot is the repository for part of the military bridge equipage of the Army, as well as tools, stores, and miscellaneous supplies. Work during the year has included the fabrication and repair of ponton equipage and the purchase and issue of materials, tools, and supplies to Engineer troops.

HONOLULU.

This depot assembles and issues property and materials for the military operations in the Hawaiian Islands, cares for property in store, makes such minor repairs to instruments as can be made locally and obtains and issues such Engineer supplies as are required by the Engineer troops stationed at Honolulu. Operations during the year have been confined to these activities.

A suitable building for storage purposes is urgently needed.

MANILA.

This depot is the repository of two divisions of the advance guard ponton equipage, and for miscellaneuos tools, property, and supplies required for issue and for reserve equipment in the Philippine Department.

The personnel at the depot was, on June 30, 1913, made up as follows:

Civilians: One storekeeper, American; 2 machinists, native; 1 clerk, native; 2 carpenters, native; 5 laborers, native.

Enlisted (all from Third Battalion of Engineers): One battalion quartermaster sergeant, 1 sergeant, and 12 privates.

These men perform all necessary office work, make and handle shipments, prevent as far as possible destruction due to rust, dry-rot, white ants, and dampness, and make repairs.

The appropriation for Engineer depots has in the past provided specifically for "incidental expenses" of the depots and for the "purchase and repair of instruments."

The increasing demands on the funds appropriated for incidental expenses and the gradual accumulation of an adequate stock of instruments for present needs makes a change in the appropriation desirable, and this year no separate estimate for the purchase and repair of instruments is submitted, but the estimate for incidental expenses is correspondingly increased and certain modifications in the wording of this appropriation recommended, so as to provide for the repair of instruments therefrom.

ENGINEER DEPOTS, 1913.

Incidentals.

Amount appropriated in the Army appropriation act of Aug. 24, 1912	$20,000.00
June 30, 1913, amount expended during fiscal year	17,596.58
July 1, 1913, balance unexpended	2,503.42
July 1, 1913, outstanding liabilities	2,430.13
Balance to revert to Treasury	73.29

Instruments.

Amount appropriated in the Army appropriation act of Aug. 24, 1912	10,000.00
June 30, 1913, amount expended during fiscal year	8,347.12
July 1, 1913, balance unexpended	1,652.88
July 1, 1913, outstanding liabilities	1,612.30
Balance to revert to Treasury	40.58
Estimate submitted for 1914–15	30,000.00

ENGINEER EQUIPMENT OF TROOPS.

With funds appropriated under this head new ponton equipage has been procured, provision made for the repair and maintenance of that on hand, and tools, instruments, supplies, and appliances procured for the prescribed Engineer equipment of posts and organizations, for military surveys, and for Engineer operations. Purchases of the necessary paper for new editions of the Engineer Field Manual have also been made as required.

Arrangements have been made for the purchase of a new type of field searchlight, which is now under construction and will, it is expected, be delivered shortly.

A type of field pile driver suitable to accompany ponton trains in the field has been designed, and arrangements have been made for the purchase of two of these appliances.

Investigations have been in progress for a number of years with a view to finding suitable substitutes for white-pine lumber for ponton equipage, white pine of the proper quality being no longer readily obtainable. Certain kinds of lumber have been selected for this purpose, and arrangements are being made to procure a sufficient quantity to continue the accumulation of an adequate supply of equipage and for the maintenance of that on hand. Present plans contemplate the accumulation of ponton material sufficient for 12 divisions of advance guard and 24 divisions of reserve equipage within the continental limits of the United States as rapidly as adequate storage therefor becomes available and as appropriations will permit. Of this quantity there are now on hand, practically complete, the 12 divisions of advance-guard equipage and about one-half the reserve equipage.

During the fiscal year numerous modifications have been made in Engineer equipment prescribed for troops, viz: By General Orders, No. 20, War Department, 1913, the reconnaissance equipment for Cavalry, Artillery, and Infantry heretofore prescribed has been reduced, the equipment prescribed for posts modified, and the furnish-

ing of paper, pencils, ink, and similar articles for reconnaissance equipment, etc., heretofore the duty of the Quartermaster Corps, is now assigned to the Engineer Department. By General Orders, No. 42, War Department, 1913, the Engineer equipment heretofore prescribed for Infantry and Cavalry by General Orders, No. 221, War Department, 1907, as amended, has been abolished and a new equipment of reserve intrenching tools, to be furnished by the Engineer Department, prescribed.

With funds available arrangements are being made for the procurement of sufficient of this equipment for the Cavalry division and six divisions, and additional equipment will be procured as rapidly as funds will permit. By direction of the Secretary of War, the duty of supplying machine-gun platoons with certain equipment prescribed by General Orders, No. 113, War Department, 1906, was transferred from the Engineer Department to the Ordnance Department, and a quantity of this equipment was, under authority of the Secretary of War, transferred to the Ordnance Department for this purpose.

Equipment, supplies, etc., purchased from this appropriation are stored at the several Engineer depots, from which they are issued to organizations, posts, and department headquarters, for surveys, and to the Organized Militia as required. Issues to the Organized Militia on approved requisitions aggregated about $3,500 during the year.

Some minor modifications in the wording of this appropriation are deemed desirable, and the estimates submitted this year contain the changes desired.

ENGINEER EQUIPMENT OF TROOPS, 1913.

Amount appropriated in the Army appropriation act of Aug. 24, 1912	$90,000.00
Collections on account of lost property, sales, etc	3,804.32
Total available	93,804.32
June 30, 1913, amount expended during the fiscal year	23,284.84
July 1, 1913, balance unexpended	70,519.48
July 1, 1913, outstanding liabilities	65,180.95
Balance to revert to Treasury	5,338.53
Estimate submitted for 1914–15	50,000.00

EQUIPMENT OF OFFICERS' SCHOOLS, MILITARY POSTS.

For the purchase of instruments for issue to officers' schools at military posts the sum of $1,500 was assigned from the appropriation for "Equipment of Officers' Schools, Military Posts, 1913," by the Secretary of War. This amount has been applied to the purchase of instruments for issue from the Engineer Depot at Washington Barracks. For similar purchases during the current fiscal year the sum of $1,500 has been assigned to the Engineer Department.

An adequate stock of instruments for present needs having been accumulated, recommendation has been made that no further estimate for this purpose be submitted at the present time.

Assigned to Engineer Department, act of Aug. 24, 1912	$1,500.00
June 30, 1913, amount expended during fiscal year	1,490.34
July 1, 1913, balance unexpended and available	9.66

CIVILIAN ASSISTANTS TO ENGINEER OFFICERS.

By the Army appropriation act of August 24, 1912, the sum of $40,000 was appropriated for civilian assistants to Engineer officers serving on the staffs of division, corps, and department commanders to enable them to secure the services of surveyors, survey parties, draftsmen, photographers, master laborers, and clerks during the fiscal year 1913. These funds have been applied to the purpose for which appropriated.

The Army appropriation act approved March 2, 1913, contained an item of $40,000 for this purpose for the fiscal year 1914. The reorganization of the military establishment into territorial departments has, by increasing the number of territorial organizations, resulted in an increase in the requirements for civilian assistants to department engineers, but it is anticipated an appropriation of $40,000 will be sufficient for the requirements of the next fiscal year, and an estimate of this amount is submitted.

Amount appropriated by Army appropriation act approved Aug. 24, 1912	$40,000.00
June 30, 1913, amount expended during fiscal year	35,532.50
July 1, 1913, balance unexpended	4,467.50
July 1, 1913, outstanding liabilities	1,334.45
Balance to revert to Treasury	3,133.05

CONTINGENCIES, ENGINEER DEPARTMENT, PHILIPPINE ISLANDS.

In the prosecution of work of great importance in the Philippine Islands in remote and almost inaccessible localities the operations of the Engineer Department require funds of wide applicability and limited restrictions as to expenditure. Owing to the circumstances under which the work must be performed an appropriation of this character has been found essential to its satisfactory prosecution. Appropriations of $5,000 each for this purpose have been made for the past four years, and an estimate of the same amount is submitted for the fiscal year 1915.

Amount appropriated by Army appropriation act approved Aug. 24, 1912	$5,000.00
June 30, 1913, amount expended during fiscal year	2,125.59
July 1, 1913, balance unexpended	2,874.41
July 1, 1913, outstanding liabilities	1,974.41
Balance to revert to Treasury	900.00

MAPS, WAR DEPARTMENT.

With the $5,000 appropriated for this purpose for the fiscal year ending June 30, 1913, a number of miscellaneous military maps were printed.

These funds are also utilized in the publication of accurate maps of our fortified harbors, which, under existing regulations, are required for the use of the Coast Artillery, and a number of these maps were printed during the year.

In view of the urgent necessity of printing certain important military maps now being prepared in addition to the prosecution of the work ordinarily accomplished under this appropriation, the estimate submitted for the fiscal year ending June 30, 1914, was increased to $10,000. Only $7,500 was, however, provided for this purpose. To permit the prompt publication of these maps, in addition to the work ordinarily accomplished under this appropriation, an estimate of $10,000 is submitted.

Amount appropriated by sundry civil act approved Aug. 24, 1912	$5,000.00
June 30, 1913, amount expended during fiscal year	4,774.25
July 1, 1913, balance unexpended	225.75
July 1, 1913, outstanding liabilities	225.75

BUILDINGS, ENGINEER POST AND SCHOOL, WASHINGTON BARRACKS, D. C.

The creation of the Engineer post and school at Washington Barracks was authorized by an act of Congress approved June 30, 1902, and the work has been carried on in accordance with a general layout approved by the Secretary of War December 22, 1904, drawing of which was published in Annual Report of the Chief of Engineers for 1906.

A detailed history of the work is given in the Annual Reports of the Chief of Engineers from 1902 to 1906.

The buildings heretofore completed have been for post purposes almost exclusively, and the present plan provides for additional buildings for school and post purposes, as follows:

1. Group of buildings, to include Engineer School and administration buildings and power house and trade-school building:		
Engineer School and administration building	$275,000	
Power house	27,500	
Trade-school building	22,000	
		$324,500
2. Completion of west barracks		40,000
3. Bachelor officers' quarters		70,000
4. Six double sets noncommissioned officers' quarters		66,000
5. Dispensary and quarters for detachment		25,000
6. Stable		20,000
7. Store sheds for wood, coal, and lumber		2,000
8. Chaplains quarters		20,000
9. Commissary officers' quarters		15,000
10. Observatory		3,000
11. Roads, walks, sidewalks, sewers, water and gas supply, electric distribution, gutters, etc		25,000
		610,500

The river and harbor appropriation act approved July 25, 1912, provided $100,000 for the construction at the Engineer School of a building with library accommodations and other facilities for the instruction of officers of the Corps of Engineers in duties pertaining to the improvement of rivers and harbors. Under this appropriation, by direction of the Secretary of War, the services of the architects who designed the original work, Messrs. McKim, Mead & White, were secured, and plans have been prepared and approved covering a school building with attached power house. Contract has been entered into with Mr. George E. Wyne for the construction of the building at a total cost of $88,900. The architects' fees will amount

to approximately $4,000, leaving a sufficient sum to cover costs of inspection, superintendence, and incidentals.

The appropriation for the construction of this building reduces the amount yet required under item 1 to $224,500, and with the experience gained in connection with its construction it is thought that this can be reduced still further, viz, to $172,000, which would reduce the total amount required to $458,000.

The work of the Engineer School is also of the greatest importance in fitting the younger officers of the corps for the important military duties which, owing to the present shortage of officers, devolve upon them at an early period in their careers. The $100,000 provided by the act of July 25, 1912, while covering so much of the total cost as belongs to river and harbor work, will not be sufficient to cover the portion of item 1 required for school purposes, including military features, and it is desirable that additional funds be provided as early as practicable for completing this group of buildings, to provide urgently needed accommodations for the administration officers of the post and engineer depot, as well as for the military functions of the school.

Amount appropriated by act of—	
June 30, 1902	$500,000.00
Mar. 2, 1903	360,000.00
Mar. 2, 1905	150,000.00
Mar. 2, 1907	32,500.00
July 25, 1912	100,000.00
Total	1,142,000.00
June 30, 1913, amount expended to date	1,042,771.50
June 30, 1913, balance available	99,228.50

In addition, $1,700 was appropriated in the Army appropriation act of March 3, 1909, for the completion of a stable. This work was done by the Quartermaster's Department.

An estimate of $50,000 is submitted to cover—

1. Trade-school building (material only; enlisted labor to be used)	$8,000
2. Completion of west barracks	40,000
7. Store sheds for wood, coal, and lumber	2,000
	50,000

EQUIPMENT OF COAST ARTILLERY, ARMORIES, ORGANIZED MILITIA.

The Army appropriation act approved March 3, 1911, provided the sum of $338.170 for the equipment of armory buildings provided by States for instructional purposes for Coast Artillery companies of the Organized Militia. By the Army appropriation act of August 24, 1912, the availability of this appropriation was extended to include obligations incurred during the fiscal year ending June 30, 1913. With these funds the installations of equipment for the instruction of Coast Artillery militia have been or are being completed at the following places:

Boston, Mass., South Armory.
Bridgeport, Conn.
New York City:
    Ninth District Armory.
    Thirteenth District Armory.
Savannah, Ga.
San Francisco, Cal.

The Army act of March 2, 1913, provided an additional sum of $185,000 for this purpose. With funds assigned from this appropriation to the Engineer Department, equipment is being installed in the Eighth District Armory, New York City, and in the armory at Providence, R. I.

The total amounts assigned to the Engineer Department from these appropriations have been as follows:

"Equipment of Coast Artillery, Armories, Organized Militia, 1912"	$110,428.59
"Equipment of Coast Artillery, Armories, Organized Militia"	45,133.97
	155,562.56

RIVER AND HARBOR IMPROVEMENTS.

Appropriations.—The funds with which the works for the improvement of rivers and harbors were prosecuted during the past fiscal year were derived from the appropriations made by the river and harbor acts approved July 25, 1912, and March 4, 1913, and the sundry civil acts approved August 24, 1912, and June 23, 1913, from such appropriations as have been provided by other general acts and by special acts of Congress, and from the available balances of former appropriations.

The following works are provided for by permanent appropriations: Removing sunken vessels; operating and care of dredge boats on upper Mississippi River; removing obstructions in Mississippi River; gauging waters of the Mississippi River and its tributaries; examinations and surveys at South Pass, Mississippi River; maintenance of South Pass Channel, Mississippi River; operating snag boats on Ohio River; operating and care of canals, etc.; support and maintenance of the Permanent International Commission of the Congresses of Navigation.

Total appropriations for rivers and harbors to June 30, 1912		[1] $697,311,347.06
Amount appropriated by river and harbor act approved July 25, 1912		31,059,370.50
Amount appropriated by sundry civil act approved Aug. 24, 1912		9,500,250.00
Amount appropriated by river and harbor act approved Mar. 4, 1913		41,073,094.00
Amount appropriated by sundry civil act approved June 23, 1913		10,045,795.00
Claims for damages, river and harbor works, deficiency act approved Mar. 4, 1913		1,157.89
Permanent annual appropriations (including $3,000 for the Permanent International Commission of the Congresses of Navigation)		297,600.00
Total		789,288,614.45
Expended under indefinite appropriations, fiscal year 1913:		
Operating and care of canals, etc.	$2,222,906.87	
Removing sunken vessels, etc.	115,208.87	
		2,338,115.74
Related works:		
Expenses of California Débris Commission (sundry civil act of June 23, 1913)	15,000.00	
Prevention of deposits, New York Harbor (sundry civil act of June 23, 1913)	85,260.00	
International Waterways Commission (sundry civil act of June 23, 1913)	15,000.00	

[1] Including permanent annual appropriations and related works.

Related works—Continued.		
International Waterways Commission (deficiency act of Mar. 4, 1913)	$1,750.00	
Building engineer school for river and harbor instruction (act of July 25, 1912)	100,000.00	
		$217,010.00
		791,843,740.19

NOTE.—The river and harbor act of March 3, 1909, appropriated the sum of $9,435,750, which included the sum of $50,000 for the National Waterways Commission, which latter item was first credited to the War Department and later transferred to the Treasury Department.

Status of works.—Statements derived from the reports of the officers in charge of the various works, and given herewith, set forth the condition of each improvement and the extent of the work performed during the past fiscal year.

Expenditures.—The total amount actually expended under the direction of the Chief of Engineers in connection with the improvement of rivers and harbors during the fiscal year ending June 30, 1913, is as follows:

Rivers and harbors (general, including examinations, surveys, and contingencies)		$32,253,801.43
Removing sunken vessels		115,208.81
Operating and care of canals		2,222,906.87
Operating snag and dredge boats on upper Mississippi, Illinois, and Minnesota Rivers		26,557.60
Removing obstructions in Mississippi, Atchafalaya, and Old Rivers		101,442.43
Gauging waters of the Mississippi River and its tributaries		9,072.25
Maintenance of South Pass Channel, Mississippi River		127,840.09
Examinations and surveys at South Pass, Mississippi River		11,490.00
Operating snagboats on the Ohio River		25,758.17
Prevention of deposits in New York Harbor		83,643.54
California Débris Commission (expenses)		10,123.44
Permanent International Commission of Congresses of Navigation		1,460.99
Meeting of Permanent International Commission of Congresses of Navigation in the United States		1,074.83
Claims for damages by collision, river and harbor works		2,076.84
International Waterways Commission		14,022.15
Building engineer school for river and harbor instruction		271.50
Mississippi River Commission:		
Improving Mississippi River	$4,638,163.60	
Deduct amounts reimbursable	88,748.26	
	4,549,415.34	
Maintaining and protecting levees of the Mississippi River and tributaries against floods	20,585.12	
Rebuilding levees of the Mississippi River and tributaries damaged by floods	1,366,254.67	
Improving Yazoo River and tributaries, Miss. (Yazoo River at mouth)	1,305.83	
Preservation and maintenance of river and harbor works (Yazoo River at mouth)	9,256.19	
		[1] 5,946,817.15
		[2] 40,953,568.09

[1] The following additional expenditures are included in items stated above:

Gauging waters of the Mississippi River and its tributaries	$8,823.53
Removing sunken vessels	1,500.00
	10,323.53

[2] This amount does not include expenditures for enlargement of Governors Island, New York Harbor, $1,507.32.

Expenditures have also been made from funds contributed by States, municipalities, and private parties for improvements as follows:

Elk and Little Elk Rivers, Md	$376.24
Sabine-Neches Canal, Tex	123,213.32
Sacramento and Feather Rivers, Cal	17,490.93
Savannah River, Ga	34,998.93
Cowhead River, Ga	2,445.79
Cold Spring Inlet, N. J	10,363.55
Harbor at Wilmington, Del	911.55
Houston Ship Channel, Tex	504,742.93
Missouri River at Sioux City, Iowa	133.80
Missouri River at Folsom, Iowa	5,010.53
Missouri River at Council Bluffs, Iowa	14,184.41
Pawtucket River, R. I	958.15
Siuslaw River, Oreg	13,500.00
Oregon Slough, Oreg	13,870.31
Mississippi River, Yazoo-Mississippi Delta	45,398.57
Mississippi River, near Memphis, Tenn	16,453.89
Levees, Mound City, Ill	231.81
Charlotte Harbor, Fla	13,985.57
	818,270.28

Estimates.—The following estimates are submitted by the Chief of Engineers for the fiscal year ending June 30, 1915:

Under continuing contracts	$7,217,500
Rivers and harbors (general, including Mississippi River Commission, and examinations, surveys, and contingencies)	34,266,395
Under California Débris Commission (expenses)	15,000
Prevention of deposits in New York Harbor	156,260

These estimates are intended to cover only the minimum requirements for the prosecution and maintenance of the various improvements, such estimates having been made up from estimates prepared on the same basis by the various district officers; this being done in order to keep within the limited total estimate deemed advisable for the next fiscal year and on the supposition that river and harbor work will be provided for hereafter by annual appropriations.

The total amount recommended for appropriation in the next river and harbor bill (excluding examinations, surveys, and contingencies) is $34,016,395, to be applied to 245 works, and for appropriation in the sundry civil bill $7,217,500, to be applied to 16 works.

Liberal appropriations are considered proper and desirable for snagging and other work necessary to make natural channels available wherever water-borne commerce exists or is reasonably prospective. It is believed that expenditures for such improvements are almost always useful and advantageous to the general public, especially since the introduction and rapid development of small gasoline motor boats for combined freight and passenger transportation. In many cases it is apparent that the failure to use a waterway is due not so much to lack of channel depth as to the presence of snags and other obstructions which can be removed at comparatively small cost, thus making the natural channel depths fully available throughout the year. When the boat commerce develops or its requirements become greater the existing clear channel will be in its best condition for further and more expensive improvements.

Improvements adopted by Congress, and not provided for in the estimates, have been omitted either on account of sufficiency of funds

now available, on account of lack of urgency or of relative importance, on account of defective projects which were adopted many years ago and are in need of reexamination with a view to revision or abandonment, or, in some cases, because recommendations for appropriations for new projects have recently been submitted to Congress in special reports.

In the cases of several improvements recommendations will be found in the text of the report for contract authorizations to cover work to be executed after June 30, 1915. In these cases the additional work, on account of its character and to insure reasonable economy, should be included in contracts or otherwise provided for in connection with the work to be executed during the coming fiscal year.

Under existing law reexaminations of existing projects are made by the Board of Engineers for Rivers and Harbors in compliance with resolutions by either the Committee on Commerce of the Senate or the Committee on Rivers and Harbors of the House of Representatives; but these reexaminations are subject to the limitation that no enlargement of the scope of the project can be considered, so that desirable extensions of projects can not be recommended. It is believed that a similar provision of law authorizing the Chief of Engineers to cause a reexamination of projects, at least those not heretofore passed upon by the Board of Engineers for Rivers and Harbors, would be in the public interest. Projects reported under the provisions of section 7 of the river and harbor act of March 3, 1899, as unworthy of further improvement by the United States or considered by the Chief of Engineers as in need of revision could in this way be fully investigated, local interests could be heard, and formal report thereon made for the consideration of Congress. It would seem advisable in connection with any such reexamination to grant authority to consider and report upon any modifications in the nature of enlargements in scope of projects believed to be desirable, when such modifications are recommended by district officers or otherwise brought to the attention of the department.

If desired by Congress for its consideration in providing for new works, reports could be submitted by the Board of Engineers for Rivers and Harbors and the Chief of Engineers upon the relative importance of the various improvements recommended as worthy of being undertaken by the United States, the order in which the works should be taken up, and the rapidity with which they should be completed, upon methods of standardization by which the waterways of the country could be improved uniformly in proportion to their capacities and to the existing or probable demands of general commerce, or even report upon a systematic scheme of such improvement embracing all waterways, whether heretofore examined and reported upon or not.

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CALIFORNIA DÉBRIS COMMISSION.

Unrestricted mining by the hydraulic process in California resulted in enormous quantities of débris being washed down into the rivers and natural watercourses draining the western slope of the Sierras. Later on hydraulic mining was practically prohibited by the deci-

sions of the courts on account of injury to streams and the adjacent private land.

The act of Congress approved March 1, 1893, created the California Débris Commission and provided that the commission should consist of three officers of the Corps of Engineers, appointed by the President, with the concurrence of the Senate. The same act prescribed the duties of the commission, which are, first, the regulation of hydraulic mining in the territory drained by the Sacramento and San Joaquin River systems (shown on map opposite p. 2492, pt. 3, of the Annual Report of the Chief of Engineers, United States Army, for 1881), so that mining by that method may be resumed and carried on without injury to other interests in the State, and, second, to mature and adopt plans to improve the navigability of the above-mentioned river systems, to protect same from damage due to mining débris, and to afford relief thereto in flood time.

Regulation of hydraulic mining and plans for improvement and protection of rivers and control of flood waters and mine débris.—The operations during the fiscal year ending June 30, 1913, consisted of regulating hydraulic mining in the drainage areas of the Sacramento and San Joaquin River systems to the end that the débris resulting from such operations should be restrained and impounded by the operators of the mines in the vicinity of the latter, and thus prevent it from reaching and causing damage to navigable streams or increasing the existing flood problems in Sacramento and San Joaquin Valleys. Examinations and surveys were also made in the drainage area of the Sacramento River to obtain detailed data needed in connection with the preparation of plans for the improvement of navigation, control and disposition of mine débris, and control of flood waters in the drainage area of that stream.

From the time of its creation in 1893 up to June 30, 1913, the commission has received 897 applications for permits to mine by the hydraulic process under the requirements of the act of Congress of March 1, 1893, and has granted permits in cases where means for properly impounding the débris were provided by the applicants. During that time the commission has also made numerous necessary examinations and surveys of portions of the Sacramento, San Joaquin, Feather, Yuba, Bear, American, Mokelumne, and other streams comprising the Sacramento and San Joaquin River systems, and prepared and submitted general plans and projects for the storage of mine débris in Yuba River and for the control of floods and débris in the Sacramento and Feather Rivers.

* * * * * * *

The Yuba River project contemplated holding the great quantities of mine débris now in that stream and tributaries to prevent it from being carried down into the Feather and Sacramento Rivers, this to be accomplished by restraining barriers or dams across the bed of the Yuba, by a storage or settling basin adjoining the river on the south in the vicinity of Daguerre Point, and by training walls below, all as located on map No. 5 (sheet A), printed with House Document No. 431, above referred to.

Later on barrier No. 1, barrier No. 2, and the flood-overflow barrier, shown on map No. 5, above referred to, were eliminated from the project, as was also the storage or settling basin in the vicinity

of Daguerre Point. Operations have since been confined to the Daguerre barrier and the works connected therewith in Daguerre Point Cut and to the construction of training walls below Daguerre Point.

The operations during the past fiscal year consisted of making a survey of Yuba River from Parks Bar Bridge, below the Narrows, down to its mouth in Feather River and preparing plans and specifications for protecting and raising the inlet wall constructed across Daguerre Point Cut in 1906. These operations were on account of new work. The expense was paid one-half by the United States and one-half by the State of California.

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WATERWAY FROM LOCKPORT, ILL., BY WAY OF THE DES PLAINES AND ILLINOIS RIVERS, TO THE MOUTH OF THE ILLINOIS RIVER, ETC.

Under the provisions of section 1 of the river and harbor act of June 25, 1910, a board, consisting of Brig. Gen. William H. Bixby, Chief of Engineers United States Army; Col. C. McD. Townsend, Corps of Engineers; Maj. Charles Keller, Corps of Engineers; Maj. J. B. Cavanaugh, Corps of Engineers; and Mr. John Bogart, civil engineer, was appointed by the Secretary of War to consider and report upon the construction of a waterway from Lockport, Ill., by way of the Des Plaines and Illinois Rivers, to the mouth of the said Illinois River; the said board to report upon the feasibility of such waterway and the most advisable depth and dimensions therefor, in case the same is recommended; also upon such measures as may be required to properly preserve the levels of the Great Lakes, and to compensate, as far as practicable, for the diminished levels in said lakes and the connecting waters thereof by reason of any diversion of water from Lake Michigan, etc. The said act made an appropriation of $1,000,000, subject to the provision that "until these plans and estimates have been submitted and a project for the improvement adopted by Congress the appropriation of one million dollars herein made shall not be available for expenditure."

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SURVEY OF INTRACOASTAL WATERWAYS FROM BOSTON, MASS., TO THE RIO GRANDE, REQUIRED BY THE RIVER AND HARBOR ACT OF MARCH 3, 1909.

The river and harbor act of March 3, 1909, directed certain surveys to be made with a view to the construction of a continuous waterway, inland where practicable, from Boston, Mass., to the Rio Grande, which were assigned to boards of engineers.

Boston, Mass., to Beaufort, N. C., section.—Report dated October 4, 1911, with maps, by the special board of engineer officers, upon the survey of that section of the proposed continuous inland waterway from Boston, Mass., to Beaufort Inlet, N. C., was duly submitted, and was reviewed by the Board of Engineers for Rivers and Harbors, pursuant to law, and its report thereon submitted December 12, 1911. These reports were transmitted to Congress and printed in House Document No. 391, Sixty-second Congress, second session.

Projects and estimates for improvement of the following sections are presented:

Boston to Narragansett Bay section	$40,000,000
Narragansett Bay-Long Island Sound section	12,322,000
New York Bay-Delaware River section	45,000,000
Delaware River-Chesapeake Bay section	12,424,500
Norfolk-Beaufort Inlet section	5,400,000

Only the last two sections named above were recommended for adoption.

New York Bay to Chesapeake Bay section, final report.—Final report by the special board, dated February 14, 1912, by the Board of Engineers for Rivers and Harbors, dated July 22, 1912, and by the Chief of Engineers, dated August 9, 1913, on sections from New York Bay to Delaware River, and from Delaware River to Chesapeake Bay, are printed in House Document No. 196, Sixty-third Congress, first session. For the Chesapeake Bay-Delaware Bay section, it is proposed to purchase the Chesapeake and Delaware Canal and then to enlarge it to a sea-level canal of 12-foot depth and 90-foot bottom width, at an estimated cost, in round numbers, of $8,000,000, subject to certain specified local cooperation; and for the Delaware Bay-New York Bay section, a plan of improvement with a view to the construction of a lock canal with 12-foot depth and a 90-foot bottom width, modified so as to permit of enlargement of the canal to 25-foot depth and 125-foot bottom width, at a total estimated cost of $20,000,000, subject to certain named conditions, is presented.

Beaufort Inlet to Key West, Fla., section.—Reports dated July 1, 1911, and April 12, 1912, with maps, by the special board of Engineer officers upon the survey of that section of the proposed continuous inland waterway from Beaufort, N. C., to Key West, Fla., were duly submitted and, pursuant to law, were reviewed by the board of Engineers for Rivers and Harbors, whose reports thereon were submitted December 18, 1911, and June 10, 1912. These reports were transmitted to Congress and printed in House Document No. 229, Sixty-third Congress, first session. Projects and estimates for improvement of the following sections to depths of 10 feet and 7 feet, respectively, are presented:

	10-foot depth.	7-foot depth.
Beaufort-Cape Fear River	$4,336,000.00	$2,872,111.00
Cape Fear-Little River	3,811,000.00	3,724,219.00
Little River-Winyah Bay	6,330,000.00	5,677,800.00
Winyah Bay-Charleston Harbor	2,645,000.00	1,227,800.00
Charleston Harbor-Savannah River	897,000.00	427,400.00
Savannah River-Fernandina	437,000.00	195,000.00
Fernandina-St. Johns River	657,000.00	251,726.75
St. Johns River-Indian River	3,528,000.00	2,491,056.03
Indian River-Key West	8,413,000.00	2,127,950.68
Total	31,054,000.00	18,995,063.46

Only the construction of the 7-foot waterway from Beaufort, N. C., to the St. Johns River, Fla., at an estimated cost of $14,400,000, was recommended by the Chief of Engineers for adoption at the present time.

Across Florida section.—Report dated November 9, 1911, with maps, by the special board of Engineer officers upon the survey of that section of the continuous inland waterway across the State of

Florida between suitable points on the eastern and Gulf coasts of said State, was submitted and, pursuant to law, was reviewed by the Board of Engineers for Rivers and Harbors, whose report thereon was submitted July 30, 1913. These reports were transmitted to Congress and printed in House Document No. 233, Sixty-third Congress, first session. A project for a canal by way of St. Johns River, Oklawaha River, Lakes Griffin and Harris, and Withlacoochee River, having a depth of 10 feet and a bottom width of 100 feet, including the necessary locks, is estimated to cost $16,538,005 for original construction and $375,000 annually for maintenance. In a supplemental report dated July 30, 1913, the special board estimates the cost of a canal 7 feet deep, with locks designed for the same depth, at $13,277,626, and the cost of a canal 7 feet deep, with locks designed for a depth of 10 feet, at $14,444,869. Neither of these projects is recommended for adoption at the present time.

Reports and approximate estimates of cost of 6-foot or less draft waterways via Lake Okechobee have been ordered prepared for submission to Congress as the final part of this report.

St. Georges Sound, Fla., to the Rio Grande section.—It is expected that the report of the other board on this section of the proposed waterway will be transmitted to Congress during its next session.

MISSISSIPPI RIVER COMMISSION.

The Mississippi River Commission, constituted by act of Congress of June 28, 1879, is in charge of the improvements of the Mississippi River from Head of Passes to the mouth of the Ohio River, including the rectification of Red and Atchafalaya Rivers at their junction with the Mississippi, the building of levees, and the improvement of the several harbors for which specific appropriations have been made. It is also charged with the survey of the Mississippi River from Head of Passes to its headwaters and with gauging the river and its tributaries.

The river and harbor acts of March 3, 1905, and March 2, 1907, prescribed that the money therein appropriated and authorized to be expended should be applied to the construction of suitable and necessary dredge boats and other devices and appliances and in the maintenance and operation of the same, with a view of ultimately obtaining and maintaining a navigable channel from Cairo down not less than 250 feet in width and 9 feet in depth at all periods of the year, except when navigation is closed by ice. They also authorized allotments from such funds in the discretion of the commission and upon approval by the Chief of Engineers, to be applied to the water courses connected with the river and the harbors upon it now under the control of the Mississippi River Commission.

Act of Congress approved June 4, 1906, provides that any funds which have been, or may hereafter be, appropriated by Congress for improving the Mississippi River between the Head of Passes and the mouth of the Ohio River, and which may be allotted to levees, may be expended under the direction of the Secretary of War, in accordance with the plans, specifications, and recommendations of the Mississippi River Commission, as approved by the Chief of Engineers, upon levees upon any part of said river between the Head of Passes and Cape Girardeau, Mo.

Appropriations are now made annually, that of March 4, 1913, being for $6,000,000.

Act of Congress approved March 4, 1913, appropriated $200,000 for examination of the Mississippi River from Cape Girardeau, Mo., to Rock Island, Ill., by the Mississippi River Commission, with a view to such improvements as will at the same time promote navigation, develop water power, and protect property adjacent to said river * * * and for building such levees as may be found necessary.

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EXPERIMENTAL TOWBOATS FOR MISSISSIPPI RIVER AND ITS TRIBUTARIES.

Under the provisions of section 1 of the river and harbor act approved June 25, 1910, a board, consisting of Col. Lansing H. Beach, Corps of Engineers; Lieut. Col. Henry C. Newcomer, Corps of Engineers; Lieut. Col. Charles L. Potter, Corps of Engineers; and Maj. Charles Keller, Corps of Engineers, was appointed by paragraph 2 of Special Orders, No. 38, Office Chief of Engineers, August 2, 1910, "for the purpose of making investigations and designing and constructing two experimental towboats of modern but different types for use on the Mississippi River and its tributaries," etc.

An outline of the work of the towboat board up to June 30, 1912, is given on page 1290 of the Annual Report of the Chief of Engineers for 1912.

At the beginning of the fiscal year 1913 the investigations of the towboat board into the questions involved in designing two experimental towboats of the best types and their complements of barges were nearing completion, and the work of bringing the results of such investigations into the available form of a preliminary report containing the recommendations of the board as to the most desirable types of boats and barges for use on the Mississippi River and its tributaries, with tentative sketches of approved boat and barge plans, and estimates of cost of constructing same, had been begun.

Incidental to the work of investigation and preliminary designing, the board had caused many interesting and valuable tests with boat and barge models to be made at the experimental model tank of the school of naval architecture at Michigan University, at Ann Arbor, Mich. In February, 1913, when the final draft of its preliminary report was nearing completion, the board decided to conduct more experiments in the model tank, so that the entire field of the investigation might be covered so thoroughly as to render the published results of the greatest possible use to all concerned. The additional tests at Ann Arbor were completed during June, 1913, and the preliminary report of the board, embodying the results of its previous investigations and of these later tests, will be submitted at an early day.

July 1, 1912, balance unexpended	$487,729.74
June 30, 1913, amount expended during fiscal year	6,551.77
July 1, 1913, balance unexpended	481,177.97
July 1, 1913, outstanding liabilities	2,500.00
July 1, 1913, balance available	478,677.97

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RULES AND REGULATIONS GOVERNING THE NAVIGATION OF CANALS, ETC.

Section 4 of the river and harbor act of August 18, 1894, as amended by section 11 of the river and harbor act of June 13, 1902, delegates to the Secretary of War the duty of prescribing such rules and regulations for the use, administration, and navigation of any or all canals and similar works of navigation that now are or that hereafter may be owned, operated, or maintained by the United States as in his judgment the public necessity may require; and he is also authorized to prescribe regulations to govern the speed and movement of vessels and other water craft in any public navigable channel which has been improved under authority of Congress whenever in his judgment such regulations are necessary to protect such improved channels from injury or to prevent interference with the operations of the United States in improving navigable waters or injury to any plant that may be employed in such operations. Such rules and regulations have been established during the past year for the following-named localities:

New York Harbor and tributary waters within a radius of 150 miles of the Battery, New York City, approved June 3, 1913; lower Detroit River, Mich., new rules and regulations to replace those approved May 13, 1907, were approved October 17, 1912, on the part of the United States; Apalachicola Bay, Fla., approved February 28, 1913, and modification approved May 17, 1913; Ohio River locks and dams, speed and movement of vessels through, approved April 8, 1913; inland waterway from Norfolk, Va., to Beaufort Inlet, N. C., approved May 13, 1913; Mississippi and Ohio Rivers, governing speed of boats on, approved April 5, 1913.

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SURVEY OF NORTHERN AND NORTHWESTERN LAKES.

General.—As early as 1816 local surveys of the Great Lakes for special purposes were made by engineer officers, but the "Lake Survey" as a systematic work was commenced in 1841. It was prosecuted thereafter until 1882, when for a time extended field operations were suspended. The correction, printing, sale, and issue of charts continued without cessation, however, the additions and corrections being largely based upon local surveys and reports by engineer officers in charge of the river and harbor improvements on the Lakes. Systematic field work was resumed in 1889.

The sundry civil act of March 4, 1911, provided that the survey of Northern and Northwestern Lakes be extended to include the lakes and other natural navigable waters embraced in the navigation system of the "New York canals." The act of June 23, 1913, provided for including Lake Champlain.

The survey proper has from the beginning been carried on under the War Department, being at first conducted by the Chief of Topographical Engineers, and by the Chief of Engineers after the consolidation of the Topographical Engineers with the Corps of Engineers.

The first regular appropriation for the Lake Survey was made in 1841, and annual appropriations followed with the single exception

of 1847. The appropriations to date for all purposes of the survey during the 72 years of its existence aggregate $4,811,879, of which $2,411.81 has reverted to the Treasury.

A full account of the operations of the Lake Survey from May, 1841, to July 1, 1881, is contained in Professional Papers, Corps of Engineers, United States Army, No. 24, which describes in detail the methods of primary triangulation employed. An extract from this publication describing the condition of lake navigation in 1841 is printed in the Annual Report of the Chief of Engineers for 1910, page 1043. A description of the methods employed in field operations in the more recent work, and in the preparation of charts is found in Occasional Papers No. 40, Engineer School, United States Army.

The season for hydrographic survey work on the Great Lakes extends approximately from May 15 to November 15, a period of six months, of which the opening and the closing two weeks are usually characterized by rough seas and windy weather. To use the short period available for profitable work in the open lakes to the highest possible advantage requires ample funds and an efficient equipment.

Surveys.—The early operations of the Lake Survey seem to have been conducted with a view to meeting the demands of a limited navigation where the greatest draft was 12 feet. With the expansion of lake commerce, the increase in vessel dimensions, and the creation of channels and harbors with progressively increasing depths, the Lake Survey has kept pace with the increasing demands by a corresponding extension of the scope of its operations. The earlier work, however, has not been lost. The highest attainable standards of accuracy and excellence have characterized the work from the beginning, and the work now in progress under present approved projects is merely an extension of the earlier work to limits which were not anticipated in former days.

The water area charted is about 95,000 square miles, of which about two-thirds is on the American side of the international boundary. The shore line is about 8,345 miles in length, and of this the American line is 4,700 miles. As a basis of comparison, the total shore line of the Atlantic, Pacific, and Mexican seaboards of the United States, excluding Alaska and all islands, is stated in Senate Document No. 74, Fifty-third Congress, second session, to be 5,705 miles long. These figures are, however, somewhat elastic, as the measurement varies with the closeness with which the sinuous shore line is followed. The work of the survey has not been limited by the national boundary, as the predominance of the navigation interests of the United States, amounting to 95 per cent of the commerce of the lakes, has warranted surveys extending to those parts of the main traveled vessel tracks passing through Canadian waters. Canadian shore line has also been surveyed where the delineation of these shores is essential to the integrity of navigation charts, as along rivers and where vessel courses are close to Canadian territory.

Charts.—The execution of the survey which terminated in 1882 involved a large amount of astronomic, topographic, and hydrographic work of a high degree of accuracy, and resulted in the preparation of a series of reliable charts for lake vessels and the furnishing of a basis for works of channel improvement upon the Lake themselves and their connecting waters. This original

series consisted of 76 charts, all of which were printed in black from copperplates.

In 1895 the chart of Lake Superior was photolithographed in colors, and this may be considered the inauguration of the present series of colored charts, although but six charts had been so published prior to 1901, when the production of colored charts by lithography was actively undertaken. The replacing of the copperplate black prints was steadily continued from 1901 to 1909, and at the close of the latter year the entire series of 123 charts then current were in colors with the exception of the chart of Niagara Falls, still carried as a black print. In 1910 the copperplates of five general charts of the Lakes, constructed on the Mercator projection and formerly published by the Hydrographic Office, United States Navy, were transferred to the Lake Survey, and the charts are now printed and sold by this organization. On June 30, 1911, the colored series had reached its maximum—in point of numbers—of 126 charts, including the five Hydrographic Office charts.

The charting of the natural navigable waters of the New York State canals, added by Congress in 1911 to the Lake Survey functions, will involve the publication of eight new charts, and the further addition of Lake Champlain to the Lake Survey work by the appropriation act of June 23, 1913, will probably add the series of five charts of that lake issued by the Coast and Geodetic Survey.

On June 30, 1913, there were in force 120 charts, comprising, with the temporary chart of lower Detroit River, 114 colored charts, 1 black print of the Lake Survey series proper, and 5 Hydrographic Office general charts.

The charts printed in colors have all depths of 18 or 21 feet and less in blue, showing at a glance where vessels may proceed with safety, and, much preferable to the old-style black prints, have proven a decided advance in chart construction and met with high favor among the navigation and related interests.

Up to February 20, 1890, one full set of charts was issued free to each United States registered vessel. Any additional charts furnished such vessels and all furnished for other unofficial use were sold at the uniform price of 30 cents each. On the date above mentioned the free issue, except for official purposes of the Government, was discontinued pursuant to law, and since then the charts have been sold for all private and unofficial use at prices ranging from 5 cents to 30 cents each, the price being intended in each instance to cover only the cost of paper and printing.

Charts may be purchased at the main office at Detroit, at the canal office at Sault Ste. Marie, Mich., and at the United States engineer office in Buffalo. Complete sample sets may be seen at the United States engineer offices at Duluth, Milwaukee, Chicago, Grand Rapids, Cleveland, and Oswego, enabling purchasers to select exactly the charts they wish to order.

From 1882 to June 30, 1913, a total sum of $46,121.22 was derived from the sale of charts at offices where they were sold and deposited in the United States Treasury.

During the fiscal year ending June 30, 1913, the number of charts sold by the Detroit office was 16,566 and by the Buffalo office 2,758, the aggregate sales being 19,324. The proceeds of the sales, amount-

ing to $2,905.98, were deposited to the credit of the Treasurer of the United States. The Detroit office issued 4,823 charts for official use and the Buffalo office 63, a total of 4,886; 467,980 of these charts have been sold and issued for actual service.

Bulletins.—The preparation and issue of series of annual bulletins and supplements relating to river and harbor improvements and navigation of the Great Lakes was begun by this office in 1889, and was transferred to the office of the Lake Survey at Detroit in 1902. They contain important data and information supplementary to the charts, but of too voluminous a character to be incorporated thereon. They are accordingly issued free in connection with the charts, and are supplied to all the important interests engaged in the navigation of the Lakes, as well as various commercial and industrial concerns and individuals with related activities. The mailing list is carefully revised each year to the end that all proper requests may be cared for and unnecessary and expensive duplication avoided.

In connection with the information service of the Lake Survey and in addition to the monthly supplements of the year mimeographed special notices are issued to important lake navigation interests and to all daily newspapers published upon the Great Lakes. These notices place in the hands of those concerned the earliest possible information relating to improvements and obstructions to navigation, lake levels, etc. The Lake survey acts as a clearing house for information of this character which is received from the various district engineers upon the Lakes and from private sources and is promptly published.

Water levels.—In 1898 operations were extended to include observations and investigations of lake levels with a view to ascertaining the causes of changes in level, determining the hydraulic data needed for formulating the laws of interlake flow, and devising the most feasible method of lake-level maintenance or regulation in the interest of commerce.

This work is now fully organized, methods of making measurements and observations to the best advantage have become fixed and settled, and the results are of increasing importance, bearing, as they do, on questions affecting international relations and obligations and on the propriety and advisability of the numerous diversions under consideration. Appendix D D D 1 of this report gives a table of discharges for all of the Great Lakes at the mean stage of each for the past 53 years as determined by the standard gauges.

PROJECT.

Surveys.—The present general project of the Lake Survey, stated in detail in the Annual Report for 1907, pages 844 to 850, comprises the following work regarded as necessary to render the surveys and the charts of the Lake Survey adequate to respond to all probable future demands, viz, the ascertainment and charting of lake depths in all significant regions of the Great Lakes to a plane 30 feet below the adopted low-water datum of the open lakes and 25 feet below the corresponding datum in the channels of the connecting rivers, the completion of the related operations of triangulation and precise leveling still needed to control properly the areas under survey, the extension of river-discharge measurements, the investigations of lake

levels, magnetic surveys in and near main vessel courses, and prompt examination of areas where obstructions to navigation have been reported.

Charts.—A general chart project for completing the series of lake charts in accordance with the probable future demand was approved on April 17, 1909, which contemplates the following work: Revision of existing charts to the standard datums for geodetic control and hydrographic reference described on pages 3009–3010, Annual Report of the Chief of Engineers for 1911; the preparation of new charts as needed to round out the series of charts of the Great Lakes, to be based upon standard datum; discontinuance of old charts as they are superseded or otherwise become obsolete; such reduction as appears practicable in the total number of separate charts by incorporating certain harbor charts as insets on the appropriate coast charts; and maintenance of the series by correction of the engravings for aids to navigation and other important changes, and reprinting of editions as the stock of charts becomes depleted by sale or issue.

At the time the above general chart project was formulated it was estimated that the completion of the new charts then considered essential, together with the anticipated revision or discontinuance of old charts and the eliminations resulting from the combination of harbor and coast charts, would eventually result in a series of 104 separate charts. This number was necessarily an approximation based upon the apparent needs at the time, but experience has demonstrated that some latitude is essential to meet arising requirements in the manner most advantageous to the public interests.

Commercial and industrial activities cause changes in the relative importance of various localities, which in turn affect the charting program. Occasionally a locality, such as Eagle River, Mich., may cease to be of sufficient consequence to justify its charting in special detail. Other localities may spring into prominence by reason of sudden abnormal development, imposing additional and unforeseen obligations upon the charting operations. Recent instances of this may be found in the harbor artificially created for the iron and steel works at Gary, Ind.; the harbor for the stone-quarrying industry at Rogers and Calcite, Mich., and similar harbor improvements reported to be under construction near Middle Island, Lake Huron; and the plant and docks now under project for the steel corporation at Ojibway, Ontario, on the Detroit River. These localities may fall within the boundaries of contemplated or existing detail charts, as at Gary, or may permit of incorporation as special insets on coast charts, as at Rogers and Calcite, and again instances might arise where a special chart would be required; but in any of these contingencies the burden of work is augmented.

After more mature experience the plan of combining harbor charts with coast charts appears susceptible of being utilized advantageously to an even greater extent than was first anticipated, tending to diminish the eventual series numerically, with practically the same amount of revisionary labor in first production but a reduction in presswork for each chart eliminated.

The project estimates of work and time on charts have been materially modified by later developments or disclosures which invalidate much of the data then available and depended upon for revising

many of the charts. For example, the charts of Buffalo Harbor and Niagara River and of Dunkirk Harbor, first slated for revision of the existing engravings, were found to require new projections and engravings, as explained in the project modification approved October 18, 1909. In other cases new surveys, works of improvement, etc., have enlarged the scope of revisionary work more than the normal amount originally assumed. In this connection may be mentioned the fact that immediately prior to the opening, in October, 1912, of the Livingstone Channel in the lower Detroit River, it became necessary to correct the map of this locality appearing as an inset on the Detroit River chart and issue it temporarily as a separate chart, in order to afford mariners an opportunity to familiarize themselves with the radically altered conditions and be prepared to meet the requirements abruptly imposed in the navigation of a previously untraveled and critically important channelway. The large demand for the chart, and many changes in the aids marking it, necessitated the publication of a second edition at the opening of navigation in 1913.

Thus the original project, while applicable in its general provisions with the flexible limitations above indicated, can not be taken as representing the exact results to be eventually attained, making adequate allowance for expanding navigational requirements.

A further study of the matter indicated, as stated on page 1329 of the Annual Report for 1912, that it would probably be more advantageous to reduce the number of charts to 111 instead of to 104. More mature experience shows, however, that further latitude in the final number of charts may possibly be desirable for public interests. In view of that fact, and as a study of chart requirements for Lake Champlain is also yet to be made, the following statement is presented as the most accurate approximation now practicable:

Estimated number of Lake Survey charts in final edition	95
Charts of natural navigable waters of the navigation system of New York State canals	8
Charts of Lake Champlain	5
Hydrographic Office general charts of the Lakes	5
Approximate number of charts contemplated in chart project	113

Water levels.—The purpose of this work is to investigate the influences which affect the levels of the water surface of the Great Lakes in order to determine the extent to which they may be regulated and in what way the depth of their navigable channels may best be preserved. The sundry civil act of June 4, 1897, in appropriating for completing the 20-foot ship channel between Chicago, Duluth, and Buffalo, directed that such "observations and investigations" be made. A project for the work was submitted and published in the Annual Report for 1898, pages 3774–3776. The Lake Survey appropriation made by the sundry civil act of June 6, 1900, provided for observations and investigations of lake levels. The present general project is the continuation and extension of that published in the Annual Report of 1898, which proposes the determination of the following questions:

1. The laws of flow in the interlake and outflow rivers at various stages of water.
2. The causes and extent of fluctuations of lake levels from year to year.

3. The effect of Government improvements already made or that may be made on lake levels.

4. The effect of the Chicago Drainage Canal or other like artificial outlet on lake levels.

5. The practicability and advisability of regulating lake levels by dams or locks and dams.

6. The nature and effect of currents, with special reference to the transportation of loose material and its obstruction of channels.

7. The effect of gales, storm waves, and barometric pressure on lake levels and currents.

8. Ice effects, as respects action on channels and interference with navigation.

The work required in the series of observations may be summarized as follows: (*a*) Measurements of discharge through and surface slopes of lake-connecting channels; (*b*) soundings and borings in rivers and lakes; (*c*) lake current observations and measurements; (*d*) continuous records of water gauges, force and direction of winds, and other meteorological data at selected stations.

WORK OF FISCAL YEAR.

Surveys.—On July 1, 1912, four parties were engaged in field operations. One of these completed the special work on which it was engaged, and was disbanded July 3, 1912. Another party was organized July 8, 1912, and the four parties thus constituted continued operations until November 18, November 21, November 1, and December 9, respectively. Field operations were resumed in April, 1913. At the end of the fiscal year six parties, which commenced operations May 12, May 16, May 6, April 15, June 12, and April 20, respectively, were at work on the Lakes, and an additional party was engaged on the survey of the inland route, Michigan, provided for by the river and harbor act of July 25, 1912. The scope of operations of these parties was, briefly, as follows:

East end of Lake Ontario.—The party en route at beginning of the fiscal year began field work July 2. Between that date and the close of the season, November 18, 1912, it surveyed about 81 square miles of hydrography and about 60 miles of shore topography north of a line from Prince Edward Point, Ontario, to Stony Point, N. Y. A party resumed operations at the same locality on May 12, 1913, and at end of fiscal year had completed the hydrography over about 45½ square miles, and the topography of Timber and False Duck Islands, east end of Prince Edward Point, and of a small area east of Cape Vincent.

West shore of Lake Michigan.—This party, on July 1, 1912, was at Racine, and at end of season, October 30, 1912, had carried the sweeping operations between the 3 and 11 foot contours to 12 miles north of Milwaukee, and soundings in a belt 5 miles wide along shore outside the 11-foot contour for about 4 miles farther. The shore topography along this reach was taken when weather prevented hydrographic work, the rivers at Milwaukee were sounded and a base line was measured at Kenosha, Wis. A detachment from the main party completed topographic surveys from Winnetka to Port Sheridan, Ill., and returned to Detroit November 21, 1912. The main party examined gauges and a reported obstruction en route, and reached Detroit November 12, 1912. Operations were resumed on May 16, 1913, and at end of fiscal year offshore soundings had been completed northward to Fort Washington and partially completed to Amsterdam, about 12 miles north of Fort Washington. The sweeping had been completed to Amsterdam. Topographic work along shore was done when weather did not permit hydrographic work.

West shore of Lake Huron.—The resurveys in this locality were under way at the beginning of the year. The hydrography was continued southward to Tawas Point, Mich., connecting with the previous year's work. Up to November 1, 1912, the area between the 3 and 11 foot contours, from Charity Island to a line bearing north from Oak Point on the east side of

Saginaw Bay, had been completed. Many changes were noted, and more than 30 uncharted shoals were discovered. Topographic work was done according to the weather. This work began again May 6, 1913, and at end of fiscal year there had been accomplished 105 square miles of hydrography (87 of which were by sweep) to a line bearing north from Grindstone City. Topographic surveys from Oak Point easterly to Port Crescent (about 12 miles) had been completed.

St. Clair River.—The small party engaged at the beginning of the fiscal year in setting permanent monuments for future use of the lake survey to mark triangulation stations of the International Waterways Commission in the vicinity of Port Huron, Mich., completed its work July 3, 1912, and was disbanded.

Niagara River.—Another party worked from July 8, 1912, to December 9, 1912, on resurvey of Niagara River. In this time 7½ square miles of hydrography, from 1 mile below Edgewater to Motor Island in the American channel, were completed; also the topography along the American shore from Niagara Falls city limits to Buffalo city line (excepting portions of Tonawanda and North Tonawanda cities) and on portions of Grand Island. This party resumed operations April 15, 1913, and on May 15 was joined by steamer *No. 1* with additional force. The resurvey was completed at end of fiscal year; the 1913 work consisted of about 9 square miles of topography and soundings from Horseshoe Reef to Grand Island and in parts of the river from Motor Island to a point 1 mile below Black Creek.

Magnetic surveys.—A party began operations on June 12, 1913, and at the end of the fiscal year had made observations for declination over 375 linear miles in the west end of Lake Erie, working eastward toward Cleveland, Ohio; also observed magnetic declination by means of magnetometer at four shore stations.

New York State canal system.—Owing to delay in passage of the sundry civil appropriation act for fiscal year 1913, surveys of the waters of the New York State canal system were not resumed until August 20, 1912, when work for completion of the Oneida Lake chart was started. This consisted of sounding over the entire lake, shore topography and triangulation, and was completed when work was closed December 17, 1912, except sweeping deemed necessary on account of rock shoals discovered in the sailing course. This sweeping was taken up April 20, 1913, and finished June 18, 1913, a swath about 1 mile wide along the sailing course having been covered, completing the surveys in Oneida Lake. The party then moved to Phoenix, N. Y., and up to the end of the fiscal year had surveyed about 9 square miles of topography for the next chart westward.

Miscellaneous—During the year the following examinations were made by parties returning from or going to their season's work: Three reported shoals or obstructions affecting navigation, one wreck, and five water gauges. One stop was necessary for steamer repairs in dry dock at Port Huron, Mich.

Charts.—During the year ending June 30, 1913, the Lake Survey issued 24 editions of separate charts, consisting of 2 new charts; 2 old charts which had been revised to both standards of geodetic and hydrographic control; 6 old charts revised to geodetic datum only; 3 old charts revised to low-water planes; and 11 editions of old charts corrected for minor changes to navigation aids, etc., and printed under the head of maintenance. Every chart sent out was, as far as practicable, corrected for all information received to the day of issue. A small chart of Buffalo Harbor, N. Y., showing new shoals and amended sailing courses, was published as an inset to supplement No. 3, Bulletin No. 21.

At the end of the fiscal year eight copper plates and two stone engravings were being revised for new editions of old charts, and new engravings were being made on stone and copper for six new charts of the regular Lake Survey series and one of the New York canal series.

The following compilation represents the progress during the year of operations under the general chart project of April 17, 1909, having reference to the 115 Lake Survey charts.

New charts (2) and revised old charts (2) completed during the year, based on both standards of projections and hydrography	4
Charts revised during the year for geodetic datum (exclusive of above 4)	6
Charts revised during the year for low-water reference (exclusive of above 4)	3
Editions printed during the year for maintenance of series	11
Total number of editions published during the year	24
Number of insets included on charts published during the year	6
Charts discontinued during the year: 5 formerly separate harbor charts (now insets) and 2 obsolete charts	7
Net reduction in total number of current series	5
Net gain in number of charts based on both standards (deducting 2 revised charts discontinued)	8
Net gain in number of all charts revised for geodetic datum	9
Net gain in number of all charts revised for low-water reference (deducting 3 discontinued)	2

For the use of vessel masters in furnishing deep-sea soundings to the Lake Survey office small maps of each of Lakes Superior, Michigan, Huron, and Ontario were prepared and 1,000 copies of each were printed.

A large amount of work was done during the year for the Office of the Chief of Engineers on maps for the military branch, under the appropriation, "Maps, War Department, 1913."

The map of the Gettysburg battle field (three-day battle), originally engraved on stone, was transferred to two plates by the Molitor process.

Bulletins, etc.—The present edition of bulletins and supplements is 2,400 copies.

Supplements Nos. 3 to 7, Bulletin No. 21, were issued between July and November of the season of 1912. Bulletin No. 22 was published in April and Supplements Nos. 1 and 2 were issued in May and June of the 1913 season.

Water levels.—The principal field work of the year comprised lake temperature observations and the maintenance of 1 staff and 10 self-registering gauges to supply accurate, continuous records of all changes in elevation of the water surfaces on the lakes and rivers. Appendix D D D 1 of this report gives a table of discharges for all of the Great Lakes at the mean stage of each for the past 53 years as determined by the standard gauges. A table showing the monthly water levels from July 1, 1912, to June 30, 1913, at Marquette, Mich., on Lake Superior; Milwaukee, Wis., on Lake Michigan; Harbor Beach, Mich., on Lake Huron; Cleveland, Ohio, on Lake Erie; and Oswego, N. Y., on Lake Ontario, will be found in Appendix D D D 1.

AMOUNT EXPENDED ON THE WORK.

The cost of the work since its inception may be taken as the expenditures therefor, less the amounts received from the sale of charts. The statement of cost to June 30, 1913, is as follows:

Expenditures (including the amount covered by existing contracts).

For surveying and charting the Great Lakes and connecting waters	$4,657,943.81
For surveying and charting the lakes and other natural navigable waters embraced in the navigation system of the New York canals	11,712.03
Total	4,669,655.84
Receipts from the sale of charts	46,121.22
Total cost of work	4,623,534.62

STATUS OF WORK.

Surveys.—The state of the field work of the Lake Survey on the Great Lakes and connecting rivers, which includes operations of triangulation, topography, precise leveling, ordinary sounding, deep-sea sounding, sweeping, hydraulic measurement, and magnetic observations, is estimated, on June 30, 1913, to be as follows: Triangulation, 85 per cent completed; topography, 72 per cent completed; precise leveling, 64 per cent completed; ordinary sounding, 64 per cent, and deep-sea sounding, 15 per cent; sweeping, 70 per cent; hydraulic measurement, 94 per cent; and magnetic observations, 96 per cent completed on land and 46 per cent on water.

Charts.—On June 30, 1913, there were in force 120 charts, comprising, with the temporary chart of lower Detroit River, 114 colored charts and 1 black print of the Lake Survey series proper, and 5 Hydrographic Office general charts of the Lakes on the Mercator projection.

The following table shows the condition of the work on June 30, 1913:

Lake Survey charts.

Total number of new or revised charts completed for both standards on June 30, 1913	68
Charts revised for geodetic datum alone	19
Charts revised for low-water reference alone	11
Charts undergoing revision or correction	10
Unrevised charts, including 1 black print	7
Total unit count of Lake Survey series on June 30, 1913	115
Total number of insets appearing on published charts on June 30, 1913	29
Total number of charts revised for geodetic datum (combining the 68 and 19 above)	87
Total number of charts revised for low-water reference (combining the 68 and 11 above)	79
New charts in process of engraving	5

Charts of New York State canals.

In process of engraving	1

COMMERCE BENEFITED.

The commerce affected by the operations of the Lake Survey and depending upon the publication and constant revision of charts and bulletins is practically the entire commerce of the Great Lakes. The

private investment in American vessels on the Great Lakes was estimated in 1907 as upward of $125,000,000, and in terminal docks and facilities many millions more. The lake waterway permitted the movement during 1912 of freight estimated as aggregating over ninety million tons.

TIME OF COMPLETION.

It was stated in the Annual Report of 1908 that, assuming adequate appropriations, the completion of the general Lake Survey project described in the Annual Report of 1907 would require 11 season's work, including the season of 1908. Since that estimate was made, however, the scope of operations has been enlarged by the acts of Congress approved March 4, 1911, and June 23, 1913, to include the natural navigable waters of the New York canals and Lake Champlain. Furthermore, the increased demand for lake charts has necessitated increased expenses in the chart department, correspondingly decreasing the amounts which it was expected to apply on field work on the Great Lakes. The expenses of the survey of the New York canals have also diminished those amounts. In consequence it has been necessary during the last few years to shorten the season of the field parties or to leave out of commission for an entire season a portion of the floating plants and equipment.

Along with the preparation of new charts and standard revision of old charts, which may be regarded as concrete features having an attainable end, the Lake Survey is obligated to maintain, as a continuing or going service, the integrity and accuracy of the series of charts already provided, so as to keep pace with constantly changing conditions. This feature of maintenance is one of primary importance, and the rapidity with which new or additional work is performed must be regulated with respect to the demands which the maintenance makes upon the working force and the available resources.

It is now apparent that the chart demands and the additional work mentioned will lengthen the time required for the completion of the project unless appropriations are correspondingly increased. The present estimate is that on the basis of the appropriation of $125,000 per annum the project will be completed in 1921.

After the completion of the general project the changing conditions of harbors, rivers, and shores, the occurrence of wrecks and of other artificial obstructions to navigation, will require the maintenance of a small equipment and organization for the revision and issuance of charts and bulletins for minor surveys and investigations in connection with wrecks and other obstructions and for the dissemination of information to mariners.

* * * * * * * *

PRESERVATION OF NIAGARA FALLS.

The act of Congress approved June 29, 1906, "For the control and regulation of the waters of Niagara River, for the preservation of Niagara Falls, and for other purposes," authorized the Secretary of War, in his discretion, to grant permits for the diversion of water on the American side for power purposes, up to a limit of 15,600 cubic feet per second, and permits for the transmission of electrical power

from Canada up to a limit of 160,000 horsepower. The act further authorized the granting of similar permits "For the diversion of additional amounts of water from the said river or its tributaries to such amount, if any, as in connection with the amount diverted on the Canadian side shall not injure or interfere with the navigable capacity of said river or its integrity and proper volume as a boundary stream or the scenic grandeur of Niagara Falls." On the recommendation of the Chief of Engineers, the study of the technical questions involved, requiring surveys and hydraulic measurements similar to those ordinarily made by the Lake Survey, was assigned by the Secretary of War on March 20, 1907, to the officer in charge of that survey, and various successive allotments have been made to defray the expenses of the investigations.

In 1906, previous to this assignment, the Lake Survey had initiated the study of hydraulic conditions in the Niagara River in connection with surveys for chart purposes in the vicinity of Niagara Falls, which work is briefly described on pages 2457–2458, Annual Report of the Chief of Engineers for 1907. Subsequent observations and measurements have been made to compare the more recent law of outflow of the Niagara River with that determined in 1898–1900, to determine the volume of diversions in the canals of the power companies on the American side and in the Erie Canal with the corresponding development of power, to derive equivalent lake and river heights, to determine current lines, depths, and contours in and above the rapids, to observe the effect of diversions on the depths over the Falls and on the continuity of their crest lines, and for other related studies.

The principal results of the work under the general project were submitted in a special report dated November 30, 1908, and in a supplementary report dated September 21, 1909, which contain detailed accounts of the investigations above outlined. These reports are published in Senate Document No. 105, Sixty-second Congress, first session. A comprehensive report summarizing and supplementing the above reports and containing a narrative history of the operations of the United States Lake Survey under appropriation "Preservation of Niagara Falls" from June 29, 1906, to June 29, 1911, was sumbitted by that office under date of September 30, 1911, and was published in House Document No. 246, Sixty-second Congress, second session.

The act of June 29, 1906, expired by limitation on June 29, 1911, and operations under the appropriation were then temporarily suspended. The provisions of the act were extended to March 1, 1912, by joint resolution of Congress approved August 22, 1911, and were again extended to March 4, 1913, by joint resolution of Congress approved April 5, 1912. Operations were continued under this act during the periods that it was operative until its expiration on March 4, 1913. By direction of the Secretary of War the supervision of power companies diverting water from the American side of the Niagara River was resumed on March 9, 1913, and has been continued to the end of the year, the expense thereof being paid from allotments from the appropriation "Examinations, surveys, and contingencies of rivers and harbors."

The permits granted by the Secretary of War under the provisions of the act of Congress of June 29, 1906, authorized an aggregate

diversion of 15,600 cubic feet of water per second on the American side for power purposes, and the transmission from Canada of an aggregate of 158,500 electrical horsepower. They are briefly summarized on page 895 of the Annual Report of the Chief of Engineers for 1908. On August 16, 1907, the supervision of the operations of the power companies thereunder was assigned by the Secretary of War to Capt. (now Maj.) C. W. Kutz, Corps of Engineers, and on August 14, 1908, upon the departure of Capt. Kutz to a new field of operations, the duty was transferred by him to the officer in charge of the survey of the northern and northwestern lakes. This duty has continued to March 4, 1913, except during the intervals from June 29 to September 11, 1911, and from March 1 to April 27, 1912, these being the periods in each case between the expiration of the law and the receipt by the officer in charge of supervision of official notification to resume operations.

The power plants of all companies operating under permits from the Secretary of War have been frequently inspected, and the detailed results of such inspections have been placed on file in the Lake Survey office and summaries thereof duly reported to the Chief of Engineers. An inspection of the graphic records showing the amount of power received by the Niagara Falls Power Co. over transmission lines from the Canadian Niagara Power Co. on November 21, 1912, showed peak loads above 52,500 horsepower for an aggregate period of more than 5 hours during the day, whereas the company's permit prescribes a limit of duration for such peaks of 2 hours in any 24. Upon investigation it appeared that this violation of permit was inadvertent and unintentional, and in the special report of the district officer it was recommended that action thereon be confined to advising the company that further importation of power in excess of the limits of permit would not be tolerated, and that due precautions must be taken to avoid excess importation in the future. This recommendation was concurred in by the Chief of Engineers and approved by the Secretary of War, and the company was advised accordingly.

Hydraulic measurements in the canal of the Niagara Falls Hydraulic Power & Manufacturing Co. were made in December, 1911, for the purpose of determining the amount of diversion by this company and the relation between the volume of diversion and the output of power. The methods used and the results obtained are described on page 3552 of the Chief of Engineer's Report for 1912. It was then determined that 78,200 kilowatts generated in the company's own power stations represented the limit of diversion prescribed by the permit, after deducting the amount of water being used in mills of tenant companies. In September, 1912, the mill of one tenant, the Cliff Paper Co., was closed down for extensive repairs, and it was announced that later in the year its turbines would be dismantled and its use of direct water power permanently discontinued. Permission was requested by the Niagara Falls Hydraulic Power & Manufacturing Co. to use through its own plant water that was charged to the Cliff Paper Co. in determining the previous limitations on output. Inasmuch as the continuation of these limitations would deprive the applicant of the use of water to which it was entitled, the district engineer officer, on September 27, 1912, granted to the Niagara Falls Hydraulic Power & Manufacturing

Co. informal permission to divert through its own plant the additional 224 cubic feet per second formerly used by the Cliff Paper Co. and to generate on its switchboard a corresponding maximum load of 81,200 kilowatts. This modification of former restrictions was subsequently approved by the Secretary of War.

The Hydraulic Power Co. of Niagara Falls, successor in interest to the Niagara Falls Hydraulic Power & Manufacturing Co., submitted an application to the Secretary of War under date of October 28, 1912, for a revocable permit for the diversion of 3,000 cubic feet of water per second from the Niagara River in addition to the 6,500 second-feet originally granted. This application was referred to the district engineer officer for report and recommendation; and upon the ground that the provisions of the Burton Act prohibited the issue of permits for further diversion, it was recommended that the application be denied. The Secretary of War concurred in this opinion and notified the company accordingly.

At the beginning of the fiscal year action was pending on the application of the Federal Light & Power Co., of Detroit, Mich., for permission from the Secretary of War to receive at the international boundary in the Detroit River and to transmit into Detroit, Mich., electrical power generated in the Dominion of Canada from waters of the Niagara River. As importation of Niagara power from Canada had already been provided for by permits or reservations to the aggregate amount of 160,000 horsepower, allowed in the first instance by section 2 of the act of June 29, 1906, this application was for the issue of a revocable permit under the provisions of that portion of the act reading:

> *Provided further,* That the said Secretary, subject to the provisions of section five of this act, may issue revocable permits for the transmission of additional electrical power so generated in Canada, but in no event shall the amount included in such permits, together with the said one hundred and sixty thousand horsepower and the amount generated and used in Canada exceed three hundred and fifty thousand horsepower.

The application was denied by the Secretary of War on August 24, 1912, and the officer in charge of the Lake Survey, through the Chief of Engineers, was then directed to invite applications, on a competitive basis, for revocable permits to import Niagara power under the above provisions. In accordance with these instructions advertisements were displayed and public notices distributed in all important cities in the United States within a radius of about 200 miles from Niagara Falls and in the smaller towns near Niagara which were likely to be interested in the importation of power. The final date for filing applications under this advertisement was October 31, 1912. Formal applications were received from the Niagara Falls Power Co., of Niagara Falls, N. Y.; the Niagara, Lockport & Ontario Power Co., of Buffalo, N. Y.; and the Federal Light & Power Co., of Detroit, Mich.

The necessity of making further investigations to determine the amount of power which might be imported under the provisions of the Burton law and of obtaining an official interpretation of this law as it affects the questions involved in the issuance of revocable permits delayed the submission of the report and recommendation by the district engineer officer until January 6, 1913. The Chief of Engineers, in transmitting the applications and report to the Secre-

tary of War, recommended that, in view of the fact that the existing law was due to expire in the near future, no additional permits should be issued for the importation of power until Congress should take further action. The Secretary of War concurred in this recommendation, and on March 3, 1913, announced his decision not to make any allotment for further importation of power during his term of office.

For the continuation of the study of river slopes in the Niagara five automatic gauges were maintained at critical points above and below the Falls during the 1912 season. The gauge records were reduced during the following winter and a further analysis of river slopes was made, adding to the valuable data on this subject.

Operations during the fiscal year, in addition to the supervision of power and transmission companies, the study of river levels, and the determination of effects of increased diversion upon lake and river heights and upon the integrity of the Falls, consisted largely in special investigations and reports prepared by the Lake Survey office on various subjects pertaining to the preservation of Niagara Falls.

During the fiscal year the following allotments have been made from the appropriation of June 29, 1906, for the purpose of defraying the expenses arising in connection with the supervision of power and transmission companies and with the investigation of slopes in the Niagara River and related subjects and for the expenses of the Niagara Falls committee: August 8, 1913, $993.25; October 5, 1912, $270; January 11, 1913, $1,000; March 27, 1913, $258.71.

Money statement.

Appropriated by act of June 29, 1906	$50,000.00
July 1, 1912, balance unexpended	21,381.84
June 30, 1913, amount expended during fiscal year	2,697.15
July 1, 1913, balance unexpended	18,684.69

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REMOVAL OF WRECK OF U. S. BATTLESHIP "MAINE" FROM THE HARBOR OF HABANA.

The removal of the wreck of the *Maine* from Habana Harbor has been carried on with appropriations aggregating $900,000, made in the acts of May 9 and June 25, 1910; March 4 and December 22, 1911, by a board of engineer officers convened by paragraph 1, Special Orders, No. 36, Office Chief of Engineers, August 2, 1910, consisting of Col. W. M. Black, Lieut. Col. M. M. Patrick, and Maj. H. B. Ferguson.

The project for removing the wreck after first exposing it within a cofferdam was approved by the President October 13, 1910.

In addition to the removal of the wreck it was required: (1) That the remains of the men who went down with the vessel and which had not been recovered should be found if possible and removed to the Arlington National Cemetery for burial; (2) that the mainmast of the ship should be sent to the Arlington Cemetery and there reerected; (3) that the wreck should be so exposed, without derangement of its parts, as to permit all information possible to be obtained as to the nature and location of the explosion or explosions which caused the disaster.

Reports relative to the removal of the wreck and the progress thereof are printed in House Document No. 919, Sixty-first Congress, second session; Senate Document No. 765, Sixty-first Congress, third session; and in Annual Report of the Chief of Engineers, United States Army, for the fiscal year 1911, pages 1119 and 3039, and for the fiscal year 1912, pages 1342 and 3565. Plan of the locality and photographs of the wreck are included in the Annual Report for 1911.

The report of the board appointed by the Secretary of the Navy to examine the wreck after it was unwatered is contained in House Document No. 310, Sixty-second Congress, second session.

The work of restoring the site and removing wreckage has been completed. During the year 136,193 cubic yards of clay and rock, 304 cubic yards of concrete, 18 steel piles, and 293 tons of wreckage were removed. Nineteen steel piles were cut off 37 feet 6 inches below mean low water, and all remaining obstructions driven to the same depth with dynamite. The remains of one body were found during the year and sent to Arlington National Cemetery for burial. The site of the wreck was swept in the presence of a representative of the Cuban Government and minimum depth of 37 feet 6 inches below mean low tide in Habana Harbor was found. A certificate to this effect was secured from the Cuban Government.

All equipment has been disposed of and all relics turned over to the United States Navy Department. The Habana office has been closed and all records transferred to New York.

The board has submitted its final report and adjourned sine die.

All field work has been completed. Nothing remains to be done except the settlement of outstanding obligations.

Up to June 30, 1913, $801,815.48 had been expended. This includes $3,113.88 reimbursed from other appropriations and $5,000 allotted to the Navy Department for the construction of memorial tablets which is to be reimbursed from the sale of the tablets. Outstanding liabilities amount to $12,944.03, which includes $11,000 set aside for the erection of the mainmast in Arlington Cemetery. The removal to Arlington National Cemetery for burial of the remains of the men who went down with the vessel cost $4,090.50. There was deposited in the Treasury from the sale of plant $2,658.22, leaving $788,896.89 as the actual cost of removing the wreck, including outstanding obligations.

July 1, 1912, balance unexpended	$205,361.33	
Received by transfer from other appropriations	1,303.21	
		206,664.54
June 30, 1913, amount expended during fiscal year, for works of improvement		[1] 105,366.14
July 1, 1913, balance unexpended	101,298.40	
July 1, 1913, outstanding liabilities	[2] 12,944.03	
July 1, 1913, balance available		88,354.37

* * * * * * *

W. H. Bixby,
Chief of Engineers, U. S. Army.

[1] Includes $5,000 to be reimbursed by sales from Navy Department.
[2] Includes $11,000 pledged for erection of mast.

REPORT OF THE CHIEF OF ORDNANCE.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ORDNANCE,
Washington, September 1, 1913.

SIR: I have the honor to submit the following report on the principal operations of the Ordnance Department during the past fiscal year, together with certain remarks as to its interests and necessities.

* * * * * * *

FISCAL AFFAIRS.

The statement giving the receipts and expenditures of the Ordnance Department under general headings for the fiscal year of 1913 is herewith submitted in tabular form, so as to show the data under the various appropriations made for the service of this department, including those for experiments conducted under the direction of the Board of Ordnance and Fortification, and for the purchase of submarine mines, the control of which rests with the Chief of Coast Artillery.

The tables constituting the statement show that on July 1, 1912, there was in the Treasury and in the possession of disbursing officers the sum of $13,967,752.03.

* * * * * * *

The total amount of the appropriations for the fiscal year 1913, including those contained in the act making appropriations for fortifications and other works of defense, approved February 13, 1913, was $10,934,123.61. The total amount with which the appropriations were credited in accordance with authority of law from sales, transfers, etc., was $2,070,809.29. The total payments made by disbursing officers and by Treasury settlements during the year amounted to $10,323,885.69. The total sales of condemned stores during the year amounted to $66,919.31, all of which was credited on the books of the Treasury Department to "Ordnance material (proceeds of sales)." The total sales to other parties covered into the Treasury Department to the credit of the fund "Miscellaneous receipts" amounted to $6,463.55. The total amount to the credit of disbursing officers on June 30, 1913, was $2,399,262.75, and the total amount in the Treasury on the same date was $14,173,911.37.

FUNDS ON HAND AT THE BEGINNING AND CLOSE OF THE FISCAL YEAR.

The principal amounts on hand at the beginning of the year pertained to the following appropriations:

Ordnance stores and supplies, 1912 and 1913	$447,362.54
Replacing ordnance and ordnance stores:	
1911 and 1912	450,080.87
1912 and 1913	1,419,233.22
Manufacture of arms, 1912 and 1913	498,717.61
Field artillery for Organized Militia, 1911–1913	634,576.16
Armament of fortifications	4,815,818.09
Fortifications in insular possessions	1,553,049.32

The status of these appropriations at the close of the fiscal year will be seen by reference to the tabular statement.

The principal amounts on hand at the close of the fiscal year pertained to the following appropriations:

Small-arms target practice, 1913 and 1914	$703,128 96
Replacing ordnance and ordnance stores:	
1912 and 1913	637,840.44
1913 and 1914	1,077,554.99
Field artillery for Organized Militia:	
1913 and 1914	864,266.33
1913–1915	999,385.89
Fortifications in insular possessions	1,407,756.16
Armament of fortifications	5,685,822.66

The above amounts under the appropriations "Armament of fortifications" and "Fortifications in insular possessions" include the sums of $2,693,000 and $511,819 which had been appropriated at the last session of Congress, respectively. Under the law these appropriations are available on the approval of the act making them and until used.

The balances under the fund "Replacing ordnance and ordnance stores, 1913 and 1914" and the appropriation "Field artillery for Organized Militia, 1913 and 1914," are available for the fiscal year 1914.

Of the above amounts reported on hand at the close of the fiscal year the greater portion in nearly every case had been allotted to meet outstanding obligations. The available balances under the above-named appropriations at the close of the fiscal year are as follows:

Small-arms target practice, 1913 and 1914	$19,655 77
Replacing ordnance and ordnance stores:	
1912 and 1913	2,152.44
1913 and 1914	74,360.74
Field artillery for Organized Militia:	
1913 and 1914	15,375.25
1913–1915	819,417.25
Fortifications in insular possessions	208,356 66
Armament of fortifications	642,323.85

It will be seen in the case of the above-named appropriations that they were largely obligated at the close of the fiscal year, except in the case of the appropriations which had been made and increased at the preceding session of Congress.

TRANSFERS AND SALES OF SERVICEABLE ORDNANCE STORES.

The value of ordnance stores transferred to the executive departments and the Organized Militia is refunded to ordnance appropriations by Treasury settlements, and the funds received become available the year in which their disposition is effected and remain so during that and the following year for replacing the stores so transferred. The total value of the stores thus transferred amounted to $1,859,223.94. Of this amount $818,669.43 was on account of transfers to the Navy Department, $117,070.19 on account of transfers to the Marine Corps, $175,272.34 on account of transfers to other executive departments, and $748,211.98 on account of transfers to the Organized Militia. In conducting experiments for the Board of Ordnance and Fortification the value of the ordnance stores which were used in them amounted to $1,144.32, all of which was refunded to ordnance appropriations.

The total of the transfers and sales amounted to $2,070,809.29, which is 18 per cent of the total amount appropriated for the use of this department in arming, equipping, and supplying the Regular Army.

PAYMENT.

The total payments made by disbursing officers amounted to $10,204,316.74 and by Treasury settlements to $119,568.95, a total of $10,323,885.69. The appropriations proper for the year amounted to $10,934,123.61.

The amounts of disbursements made at the principal arsenals and in the Ordnance Office during the fiscal year are as follows:

Frankford Aresnal	$1,928,515.97
Rock Island Arsenal	2,845,769.17
Springfield Armory	936,673.91
Picatinny Arsenal	425,503.32
Watervliet Arsenal	339,139.66
Watertown Arsenal	874,021.17
Ordnance Office	2,110,252.36

AMOUNTS COVERED INTO THE SURPLUS FUND.

The principal amounts covered into the surplus fund of the Treasury were:

Ordnance service, 1911	$2,614.25
Ordnance stores and supplies, 1910 and 1911	1,253.76
Replacing ordnance and ordnance stores, 1910 and 1911	2,361.14
Repairs of arsenals, 1911	1,142.05
Blank ammunition, maneuver camps, 1911	3,239.68

COMPARISON OF THE FISCAL STATEMENT WITH THAT OF THE PRECEDING YEAR.

Comparing the fiscal statement with that of the preceding year it will be found that the amount of the appropriations was increased from $7,388,758.02 to $10,934,123.61, an increase of $3,545,365.59; the amount of disbursements decreased from $10,764,514.93 to $10,204,316.74. The amount received from transfers to the executive departments and the Organized Militia decreased from $2,481,777.60 to $1,859,223.94. The amount available for disbursement at the close of the fiscal year increased from $13,967,752.03 to $16,573,174.12, an increase of $2,605,422.09.

SCIENTIFIC MANAGEMENT.

In my annual reports for the fiscal years 1911 and 1912 I described the Taylor system of scientific management as it had been installed and put in practical operation at the Watertown Arsenal, and as certain features were in process of installation at other arsenals. The system has continued to operate well at the Watertown Arsenal, where a radical advance over the stage which its introduction has reached at the other arsenals is the application of the time study and premium features. These features have been fully described in my annual report for the fiscal year 1912; they relate to the ascertainment of the best method of doing a job of work, to the instruction

of the workman in this method, and to the stimulation which is offered him for carefully following it. As there is very little repetition work at the Watertown Arsenal, and as the number of men who are capable of making time studies is limited, it is possible to have only a portion of the force at any given time engaged upon premium jobs. Effort is constantly being made, however, to increase their number, and the success which has been attained is made evident by the fact that whereas in August of 1912 only 114 men, of about 600 employed at that establishment, worked under the premium system, in the month of August, 1913, this number had been increased to 236; and while the amount paid out in premiums to these men in August, 1912, was $1,037.91, the amount so paid out in August, 1913, was $2,258.51. In the month of May, 1913, the percentage of the entire working time of the whole number of employees in the foundry, of the class who worked premium jobs at all, which was spent on such jobs was 66.95, and in the machine shop this percentage was 45.68. In the month of August, 1913, the percentage in the foundry was very nearly the same, namely, 67.18, but in the machine shop the figures advanced to 53.51 per cent. In the month of August the average premium earned by molders for the time they worked on premium jobs was 27.64 per cent of their day rate, and for the machinists this average was 26.96 per cent. The total amount paid out in premiums during the 17 months from January 1, 1912, to May 31, 1913, was something over $22,000. This was over and above the regular wages, which were the same as those in the vicinity, no reduction having been made.

It is a difficult matter to give in figures the amount of advantage which has accrued to the Government from the use of the system. None of the principal product of the arsenal which was completed during the fiscal year 1913 was identical with what had been completed during the preceding fiscal year, so that comparative costs are difficult. Also, none of the product of the arsenal is also procured from private manufacturers, so that this kind of comparison can not be had. A private establishment has very conclusive evidence as to the increase of economy and efficiency in production in the effect upon the balance of profit which is available for dividends; but this highly satisfactory method of estimating efficiency is not applicable in Government establishments. Analyses of a large number of different jobs, taken at random, made both in the fiscal years 1912 and 1913, show that the production of the individual when working under the premium system, with the rate set after careful study, is between two and a half and three times that under the ordinary day-work system. In four instances the same job was done by the same men under the two systems, and the average time taken under the day-work system was 2.72 times that taken under the premium system. It should be remembered that when time is gained in this way there is a saving not only of the pay of the workmen, but also of the frequently much more considerable overhead charges. A computation might be made as to the total saving to the Government upon this basis as compared with what the cost would have been expected to be under the day-work system, but of course it could only be approximate. It might be stated, however, that there has been revoked from allotments made Watertown Arsenal for doing its work during the fiscal

year 1913 the sum of $73,401.05. This is the actual saving as compared with the amount which it was estimated in advance that the work would cost. It must be remembered, however, that part of these estimates were made in expectation of the use of the system which resulted in the savings, so that it does not afford a full estimate of the value of the system as compared with an estimate of the cost which might have been made without it. At some of the other arsenals the situation is better in this respect, for the reason that similar articles are both fabricated at the arsenal and procured from private manufacturers.

At the Frankford Arsenal this is the case to a very considerable extent, and as a result it is computed that in the manufacture of artillery ammunition and small-arms ammunition at that arsenal a saving of over $1,500,000 was made during the year as compared with what the same ammunition would have cost if procured from private establishments at the best prices which were offered. Also, in the manufacture under contract of these same two classes of ammunition, $400,000 more were paid than it would have cost to make it at the arsenal. The Taylor system, as taught by experts in shop management under this system, has not been introduced in the manufacture of artillery ammunition or small-arms ammunition at the Frankford Arsenal, but that arsenal has for a long time practiced the piecework system of payment, has recently introduced a premium system, and has paid careful attention to the same kind of methods of efficiency as those pertaining to the Taylor system, and has had the benefit of all the assistance which could be given by the Watertown Arsenal in taking advantage of the teachings of Mr. Barth, Taylor system expert, who had been employed at the latter place.

At the Rock Island Arsenal the systemization features of Mr. Taylor's system have been in course of installation for nearly two years, and elsewhere in this report are stated comparisons of costs of the different articles fabricated as compared with former prices. The method used in getting the system going at the Rock Island Arsenal was to send one of its officers to Watertown Arsenal for the purpose of learning as much as he could absorb of the system established at the latter place. It is not claimed that in the time that this officer spent at the Watertown Arsenal he could become sufficiently master of the system as to install it in its entirety at the Rock Island Arsenal, but he has been able to carry away enough to keep the arsenal staff well employed for nearly two years in putting what he learned into effect.

At the Watervliet Arsenal similar effort has been made, but there was some disadvantage to this arsenal from the fact that the visiting officer had to leave the department through the expiration of his detail a few months after he had returned from the Watertown Arsenal. Watervliet also labors under the disadvantage of inability to compare the cost of its product with the price of private manufacturers, since the field and seacoast cannon which it constructs are not now procured from private sources, the work of the department not being sufficient to keep the arsenal going to such an extent as would be desirable.

The Springfield Armory also uses in its very efficient manufacture many of the principles of the Taylor system, although they were not

obtained from Mr. Taylor or his experts, but have been applied through many years, and lately at an increasing rate, by the officers of the armory. The principal output of the armory, the caliber .30 rifle, is believed to be made with remarkable economy; but here again the most satisfactory comparison possible, namely, that with the cost of outside production, is not available, since the Government makes all of its own rifles. The manufacture of automatic pistols has, however, just been inaugurated at the armory, and in the course of a year it will be possible to make comparison of its cost with the price which is paid private manufacturers.

Operations at the Watertown Arsenal had been going on with remarkable smoothness since my last annual report, when, in June last, two petitions signed by something over 300 of its workmen were presented, asking the discontinuance of the system. The features objected to were those relating to time study and the premium system of payment. A number of complaints were instanced, but these were of such trivial and unsound nature and were so easily answered that it seems difficult to believe that they furnished the real basis for the number of signatures that were appended to the petitions. The petitions were addressed to the Secretary of War, and I have dealt with them in a memorandum which accompanies this report as Appendix I.[1] I will not attempt to give even the substance of the memorandum, but will state its conclusion that I believe this apparent opposition to be artificially worked up by a few discontented employees, with the assistance of influence outside the arsenal, and I have recommended that the subject be investigated by the Commission on Industrial Relations appointed by the President under the act approved August 23, 1912. The War Department has accepted my recommendation and has taken steps to induce the commission to make the investigation referred to.

When, nearly two years ago, the extension of the systemization features of the Taylor system from the Watertown Arsenal to the Rock Island Arsenal was undertaken it met with strenuous opposition from a number of the employees, which opposition was fostered and to a certain extent led by officials of labor organizations outside the arsenal. Some of these officials went to the vicinity of the arsenal and used their efforts to prevent the installation of the system. Labor representatives in Washington also exerted their influence against it, and political pressure was resorted to. The opposition took the form of a stand against what is known as the "job card," which is a ticket upon which is noted the name of the job upon which a workman is employed, the name of the workman, the designation of the machine to be used, the time of starting on the job, the time of finishing it, and a few other items of information. Its object is to secure accurate record of the time required to do the work and of certain other facts, such as its inspections, etc., in order that its cost may be properly charged to the order to which it belongs, which often includes a large number of just such jobs. The opposition to the card was as the beginning of the Taylor system, whose introduction it was intended to forestall at its inception. It was not yielded to; but careful explanation of the object of the card was made, and of the fact that it had nothing to do with the subject

[1] Omitted.

of wages, but was intended to promote accuracy of cost keeping, and its use was insisted upon. No trouble followed, or has followed since, and the employees have learned from experience that neither this nor any other part of the system which has been introduced contains any element to their disadvantage, as was fully explained to them in the beginning.

SURPLUS MATERIAL.

In my last annual report I made reference to the savings resulting from the use of old material, which had been purchased in excess of requirements under former manufacturing orders, and some of which also had been turned in as scrap from the service, which amounted to something over $122,000. As there stated this supply of material arose from the practice of making purchases from the allotment of funds made to carry out each manufacturing order, of the material estimated to be necessary to carry it out. As it was impossible to estimate accurately in advance, the natural result of overpurchase followed, and the material left over, not being systematically disposed of as manufacturing stock, of which no general supply was authorized or contemplated by the then system, in time was lost sight of and remained stored in out-of-the-way places. Similarly material, such as old cartridge cases turned in from the service, was used in the manufacture of new stores without any definite account being taken of its value and accounting for it made. Systematic attention to this subject has continued during the fiscal year just elapsed, and the saving resulting has amounted to three or four times that reported last year, the larger part having arisen at the Frankford Arsenal. Owing to the great press of other clerical work the amount of these savings, although recorded, has not been gathered up and made ready for presentation, but it is possible to say that it is in the hundreds of thousands of dollars.

CASH REWARDS FOR EMPLOYEES.

In my last annual report I referred to the passage of an act which authorized the payment of cash rewards for the most valuable suggestions submitted by employees, and of the necessary instructions having been issued for putting the act into effect. October 1 to December 31, 1912, was designated as the first quarterly period within which rewards might be won. Up to the end of the fiscal year three periods had elapsed. The number of suggestions considered meritorious and the amounts paid each quarter are shown below:

Period.	Number of meritorious suggestions reported during quarter.	Amount paid during quarter.
Oct. 1 to Dec. 31, 1912	3	$38.46
Jan. 1 to Mar. 31, 1913	4	49.00
Apr. 1 to June 30, 1913	5	61.00
Total	12	148.46
Average amount paid per suggestion		12.37

It will be noted that the number of cases reported and the amount paid increased each succeeding quarter, and it is expected that there will be further increases as the working of the act becomes more generally known, with corresponding benefit to the department in improved methods and output. The amount which has been paid is not as great as was anticipated, but the stimulating effect can not be other than good. In the meantime there is some satisfaction in noting that the act has not produced a tendency to run away with the subject, and to make awards under conditions not justifying them.

OPERATION OF LIABILITY ACT.

The act providing for the compensation of employees injured while at work was approved on May 30, 1908. It requires an absence, as a result of injury, for at least 15 days before compensation is paid, after which full wage is paid during the period of disability up to one year. These provisions have the disadvantage of permitting unnecessary extension of the time absent so as to make it as much as 15 days when the injury itself would not justify it, and also of failing to furnish an incentive for returning to work as soon as the employee's condition would permit. The table below gives some figures brought out by the operation of the act:

Year.	Total injured.	Absent on account of injury.							Amount paid on account of disability.	Total number of employees.
		Total.	0 to 5 days.	5 to 10 days.	10 to 15 days.	15 to 20 days.	20 to 25 days.	25 days and over.		
1909	286	236	87	33	13	44	13	46	$3,714.70	6,628
1910	372	284	78	37	19	47	39	64	11,541.15	6,037
1911	518	326	115	29	12	47	43	80	15,218.85	5,444
1912	612	358	131	29	11	65	43	79	15,865.99	5,317
1913	800	441	178	44	17	64	48	90	18,376.30	5,305
Total	2,588	1,645	589	172	72	267	186	359	64,716.99	.....

It will be observed that the number reported injured and the number absent on account of injury have increased progressively from 236 so absent in 1909, the first year after the passage of the act, to 441 in 1913. It also appears that the number who were out for as much as 10 days and who then returned within 15 days has been quite small, while the number out 25 days and over increased from 46 in 1909, when the total number of employees was 6,628, to 90 in 1913, when the total number of employees was 5,305. The amount paid on account of disability also increased from $3,714.70 in 1909 to $18,376.30 in 1913. The years named are fiscal years.

I think that a system of safeguarding employees from bearing the whole burden of loss which results from their injury is wise as well as just; but I see no reason for lifting the entire burden from them and placing it on the employment; nor do I see any reason for requiring that they shall bear the entire burden unless the loss of time amounts to as much as 15 days. I think that the law might be improved by changing it so that payment for time lost through injury would commence concurrently with the loss of time, and that the payment should not be full payment, but should leave upon the em-

ployee the burden of such a portion of the time lost as he would not like to bear, and which would constitute an incentive for him to make the time as short as possible. For example, the payment of 60 per cent of the wages from the time of the occurrence of the injury necessitating absence from work, continued under the same conditions as to length of time as at present, would avoid the objections here stated.

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COST OF MAINTENANCE OF THE ORGANIZATIONS OF THE SEVERAL BRANCHES OF THE LINE OF THE ARMY.

The records of the cost of maintenance in ordnance equipment of organizations have been kept during the past year under the same headings as given in my last annual report. The amounts given in these records of the cost of maintenance cover the value of all ordnance property expended (except the value of ammunition expended in target practice), lost and not charged for, lost through desertion of soldiers, condemned and destroyed, condemned and sold (less 10 per cent allowed for the value of material sold), and condemned and turned in (less 10 per cent allowed for the value of the material turned in).

Table I shows, first, the five organizations in each branch of the service whose cost of maintenance has been least, followed in each case by the five organizations in the same branch of the service the cost of whose maintenance has been greatest, arranged in the order determined by the total cost of maintenance of each for the three calendar years of 1910, 1911, and 1912.

As the cost of each organization for another year is added to its cost for the two preceding years, the average annual cost approximates closer to the true cost of maintenance than the data submitted in my previous reports.

TABLE I.

Engineers.			Signal Corps.			Cavalry.						Field Artillery.					
Order of cost of maintenance.	Company.	Amount.	Order of cost of maintenance.	Company.	Amount.	Order of cost of maintenance.	Regiment.	Amount.	Order of cost of maintenance.	Troop and regiment.	Amount.	Order of cost of maintenance.	Regiment.	Amount.	Order of cost of maintenance.	Battery and regiment.	Amount.
1	D	$701.39	1	C	$28.47	1	9th	$38,820.45	1	H, 9th	$2,262.27	1	4th	$27,356.28	1	A, 4th	$3,440.59
2	G	1,160.38	2	G	45.66	2	14th	51,862.68	2	G, 9th	2,413.24	2	2d	54,945.12	2	C, 4th	4,018.45
3	C	1,236.40	3	K	83.30	3	4th	53,005.56	3	M, 9th	2,414.35	3	5th	56,779.32	3	E, 4th	4,557.49
4	B	1,471.76	4	H	119.22	4	10th	54,755.07	4	E, 10th	2,501.48				4	F, 4th	4,725.46
5	H	1,512.90	5	F	130.41	5	11th	57,650.26	5	L, 14th	3,004.32				5	D, 4th	4,948.06
8	L	1,792.92	6	A	2,626.33	11	15th	65,345.59	176	C, 8th	8,033.48	4	6th	72,220.92	32	C, 1st	17,206.50
9	A	1,918.29	7	L	3,018.83	12	13th	68,925.51	177	E, 15th	8,036.90	5	3d	84,943.12	33	B, 1st	17,215.59
10	I	3,587.16	8	D	3,270.73	13	2d	71,205.93	178	D, 5th	8,412.22	6	1st	94,331.37	34	F, 6th	17,268.46
11	M	5,593.39	9	I	3,663.02	14	8th	71,313.46	179	K, 7th	8,421.95				35	A, 1st	18,172.17
12	K	8,923.30	10	E	4,542.42	15	7th	73,205.92	180	F, 8th	9,291.78				36	F, 3d	23,620.36

Coast Artillery Corps.			Infantry.						Porto Rico Regiment.			Philippine Scouts.		
Order of cost of maintenance.	Company.	Amount.	Order of cost of maintenance	Regiment.	Amount.	Order of cost of maintenance.	Company and regiment.	Amount.	Order of cost of maintenance.	Company.	Amount.	Order of cost of maintenance.	Company.	Amount.
1	37th	$46.40	1	25th	$8,696.90	1	D, 16th	$197.54	1	E	$857.84	1	49th	$482.99
2	93d	47.03	2	16th	9,662.74	2	M, 22d	252.44	2	C	1,204.87	2	32d	504.84
3	108th	60.19	3	10th	10,117.32	3	H, 16th	274.53	3	A	1,359.76	3	51st	813.40
4	132d	63.98	4	22d	10,961.77	4	F, 22d	297.52	4	F	1,679.90	4	42d	819.18
5	97th	67.83	5	24th	11,089.20	5	L, 29th	305.09	5	B	1,724.61	5	31st	825.27
166	162d	889.97	26	23d	18,108.74	356	M, 8th	2,593.31	6	G	1,885.05	48	33d	2,574.79
167	22d	893.49	27	27th	20,305.23	357	I, 13th	2,726.25	7	D	1,972.41	49	6th	2,629.56
168	41st	923.36	28	13th	20,550.39	358	C, 8th	2,787.02	8	H	2,108.35	50	2d	3,065.81
169	70th	1,073.65	29	8th	20,599.49	359	A, 17th	2,874.27				51	50th	3,276.70
170	111th	2,027.68	30	30th	20,882.13	360	D, 30th	3,128.11				52	44th	3,492.81

Taking the several branches of the service in the order in which they are listed, it will be seen that Company H of the Engineers, which was No. 1 on the list for the two preceding years, has dropped to No. 5 in the order of cost of maintenance, and Companies D, G, and C have advanced from Nos. 2, 3, and 4 to Nos. 1, 2, and 3, respectively. Companies I, M, and K, which were Nos. 10, 11, and 12 last year, retain those places.

In the Signal Corps, Companies B and M, having insufficient ordnance property in their possession to make a comparison of their cost of maintenance fair to other like organizations, are omitted from the list. Each of the companies, except A and L, which exchanged places Nos. 6 and 7, retains its position of last year.

In the Cavalry, the Ninth Regiment retains first place for the second consecutive year; the Thirteenth and Second Regiments advance from thirteenth and fifteenth to twelfth and thirteenth places, respectively, while the Fourth and Eighth Regiments drop from second and fourth to third and fourteenth places, respectively. The Seventh Regiment, which was in tenth place last year, now goes to the bottom. The Fourteenth, Tenth, Eleventh, and Fifteenth Regiments, which were in sixth, eighth, seventh, and ninth places last year, are now in second, fourth, fifth, and eleventh places, respectively. Among the troops, H of the Ninth and D of the Fifth advance from second and one hundred and eightieth places to first and one hundred and seventy-eighth places, respectively; M of the Ninth retains third place; the other troops, with F of the Eighth at the foot, held places 103, 170, 151, and 120, respectively, last year; C of the Eighth and F of the Eighth each shows an appreciable increase in cost of maintenance.

In the Field Artillery, each regiment retains its position, except the Third and First, which exchange places. The first five batteries belong to the Fourth Regiment. A and C have each gained one place, E two places, C of the First four, and B of the First one place; A of the First retained its place; D of the Fourth, which was first last year, goes to fifth place. F of the Fourth, F of the Sixth, and F of the Third, which are now shown in the list, held the sixth, twentieth, and thirty-first places, respectively, last year. B of the Fourth and A of the Third, which held the fourth and thirty-third places last year, are now in the seventh and thirtieth places, respectively.

In the Coast Artillery, two of the organizations of those named last year remain in the table for this year. The Thirty-seventh Company retains first place, and the One hundred and eleventh goes from one hundred and sixty-ninth to one hundred and seventieth in place of the Thirtieth Company, which is now in forty-eighth place.

In the Infantry, the Tenth and Thirtieth Regiments retain their positions. The Twenty-fifth Regiment advances from second to first, and the Twenty-second Regiment falls from first to fourth place; the Sixteenth, Twenty-third, and Twenty-seventh Regiments each gains two places. The Nineteenth, Fourteenth, and Seventeenth Regiments, which held the fifth, twenty-sixth, and twenty-seventh places last year, are now in the tenth, twenty-second, and twenty-fourth places, respectively.

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ORDNANCE EQUIPMENT OF MOBILE ARMY FOR WAR.

The small arms, except some revolvers, and the personal equipments for the recruits necessary to bring the regular organizations from peace strength to war strength are stored at the recruit depots, so that in case of emergency recruits may be armed and equipped thereat before joining their proper organizations.

The arms, equipments (personal and horse), ammunition, and miscellaneous articles for the different branches of the service required for the proper equipment of the number of volunteers that it is anticipated will be raised in case of war with a first-class power (in addition to the Organized Militia as armed and equipped) are on hand at arsenals or depots, under manufacture, or to be manufactured under appropriations now available, with the following exceptions:

(*a*) *Cavalry:* A large number of horse equipments are still required to complete the equipment of cavalry troops. The shortage in horse equipments is due to the fact that pending the adoption of new equipment no considerable number of such equipments have been manufactured in recent years, and the supply on hand has been largely decreased. As the tests preceding the adoption of the new model of equipment have been completed and the modified equipment approved, the manufacture of the necessary number of horse equipments to make up this shortage has been undertaken. The deficit in these articles can be rapidly made up if sufficient funds are appropriated for the purpose.

(*b*) *Field Artillery:* Of the 264 batteries required for the mobile army of 450,000 officers and enlisted men in continental United States in case of war with a first-class power, the necessary number of field guns, carriages, limbers, and equipments for only 188 batteries are now in the possession of the Regular Army or Organized Militia, in ordnance establishments, under manufacture or to be manufactured under appropriations now available, with the exception of a number of bolos and scabbards and a number of horse equipments for the individually mounted men. The amount of ammunition on hand for the field guns is far short of that considered desirable. No permanent ammunition trains have been provided.

(*c*) *General war plans:* The plans of the Ordnance Department in case of a war with a first-class power have been published in Ordnance orders. These plans provide for complete arrangements for the accumulation of reserve ordnance and ordnance stores as far as the appropriations will permit, as shown above; for the distribution of these reserve supplies to designated arsenals, each covering an ordnance supply district; for the acceleration of the procurement of the remaining supplies needed; for quick or automatic issue of the ordnance equipment of all kinds required to raise the organized troops to field strength and for the volunteers; for ordnance depots for maintaining in the field for six months each Infantry and Cavalry division of the proposed force; and for the necessary telegrams and letters, ready for signature, for putting in motion the various agencies of the department for accomplishing the above and other necessary objects. The plans are based upon the approved plans of the War Department and have been actually carried out to a large extent except, as noted above, as to horse equipments and field artillery, especially its ammunition.

SMALL ARMS.

Semiautomatic shoulder rifle.—Tests of semiautomatic shoulder rifles, designed by this department and submitted by private individuals, have been continued during the past year. The department's endeavors to encourage private individuals in their work of designing such a rifle have met with some success. Several requests for tests of rifles along the type desired have been received, showing that an interest is being taken in the matter by inventors. One of the rifles tested, while not developed sufficiently to warrant adoption for use in the military service, has shown promising results.

Automatic pistol, caliber .45, model of 1911.—A sufficient number of automatic pistols have been delivered to properly equip all regular troops serving in the United States, Hawaii, Panama, and Alaska, and general issues thereof have been made to the Infantry, Coast Artillery Corps, Signal Corps, Field Artillery, and Engineers, and are now being made to the Cavalry.

The sum of $300,000 appropriated by Congress by the act dated March 3, 1911, for the purpose of procuring automatic pistols, etc., for the Organized Militia enabled this department to procure 16,110 pistols and pertaining equipments, and that number of such articles are now practically on hand available for issue to the Organized Militia. Issues to the Organized Militia of these articles have begun, and will continue until such time as the articles procured for such purpose shall be exhausted; but the number procured is not sufficient to fully equip the organizations of this arm of the service by several thousand pistols.

The Springfield Armory has established a plant for the manufacture of the automatic pistol, and manufacture thereof has been inaugurated at that armory.

Cavalry sword and scabbard.—A new sword and scabbard for officers and enlisted men of Cavalry organizations have been adopted. The sword has a double-edged straight blade 35 inches in length, the guard and gripe being modeled after the design recommended by the Cavalry Equipment Board. The body of the scabbard for enlisted men and for officers in the field is made of hickory, covered with rawhide and tubular webbing, with a metal tip. A nickel-plated scabbard has been adopted for use of officers for dress occasions and for use in garrison.

The manufacture of these swords and of officers' scabbards has been undertaken at the Springfield Armory, and that of the scabbards for enlisted men at the Rock Island Arsenal. It is expected that a sufficient number will be manufactured to enable issues to be made to cavalry organizations in the near future.

A chain sling to replace the present dress sling has been adopted for the use of officers in carrying the new sword and steel scabbard. No means are provided for carrying the new sword and scabbard for enlisted men when dismounted, as those articles of equipment will be habitually carried on the saddle.

Infantry equipment, model of 1910.—The manufacture and purchase of Infantry equipments of the new design (model of 1910) are proceeding satisfactorily. Such equipments have been issued to 14 regiments of Infantry and certain Engineer troops. In reports received from the troops who have had the equipment in their posses-

sion for some time it is stated that the equipments have been, in general, satisfactory. The field tests have shown that certain minor changes would improve a few of the articles, and the recommendations made in this respect have been carried out as far as practicable.

This department has in store, or under manufacture or purchase, approximately 125,000 sets of Infantry equipment of this new design. Approximately 9,000 sets of such equipment were destroyed in a fire at the Benicia Arsenal. An estimate was submitted to Congress for funds to replace the stores destroyed, but so far favorable action thereon has not been taken.

A small number of woven-web gun slings have been procured from a private manufacturer and issued to three companies of Infantry and the School of Musketry for test for one year in order to determine their serviceability in comparison with the leather gun sling.

Proposed new Cavalry equipment.—The Cavalry Equipment Board recommended that new designs of personal and horse equipments for the Cavalry be adopted, but that certain field tests be made in order that any minor defects developed in the equipments might be overcome before the general manufacture thereof was undertaken.

To comply with this recommendation, which was approved, sufficient equipments were manufactured for Troops B and D of the Eleventh Cavalry, stationed at Fort Oglethorpe, Ga., which were issued to those troops early in October, 1912. The tests continued from that time and were completed about June 30, 1913. Slight modifications were recommended in a few articles. These modifications have been completed and a set of equipments was submitted and approved by the War Department. Orders have been given for the manufacture of a limited quantity of these equipments, and further orders will be given when funds become available.

A halter tie rope has been adopted for use in lieu of the halter strap, and issue thereof is being made to troops.

The saber knot for enlisted men recommended by the Cavalry Equipment Board has been adopted.

Range finder for Infantry and Cavalry.—The tests of range finders at the School of Musketry have been continued throughout the year. It is expected that these tests will be completed during the coming year, at which time action will be taken with reference to the adoption of a range finder for Infantry and Cavalry to replace the Weldon range finder, with which these troops are at present equipped, but which is not entirely satisfactory.

Fencing equipment.—Experiments to determine the advisability of adopting new outfits for bayonet fencing have been continued throughout the year. The tests of the bayonets at the School of Musketry have not yet been completed.

Electrically operated targets.—Two Ellis self-scoring targets were purchased, one of which is installed at Fort Myer, Va., and the other at the District of Columbia National Guard rifle range. During their test some minor defects developed in these targets, but as a whole the results obtained were very promising. Since the installation and test of these targets instructions were received from the Secretary of War to purchase 9 such targets, namely, 3 targets "A" (200 and 300 yards range), 3 targets "B" (500 and 600 yards range), and 3 targets "D" (for rapid fire and skirmish fire), and to install one of each of

the three different styles of targets at each of the following-named posts: Fort William McKinley, Rizal, P. I.; Fort Sam Houston, Tex.; and Fort Sill, Okla.

Galveston, Tex.—An officer of this department was assigned to duty as chief ordnance officer at the port of embarkation, Galveston, Tex., upon concentration of the Second Division in that vicinity. A limited number of small stores, such as spare parts, cleaning materials, etc., and also such stores as were necessary for the proper equipment of the troops of the division, were kept on hand. Such stores as were not on hand at Galveston were issued from the San Antonio Arsenal. Under the above method the promptness and completeness of the supply of ordnance and ordnance stores to the troops of the Second Division have been generally satisfactory.

GUNS AND MORTARS.

Installed armament.—Reports from armament officers and from artillery sources indicate that the guns and mortars mounted in the seacoast fortifications have been maintained in a satisfactory state of efficiency during the year. The principle of making arsenal commanders responsible for the inspection, repair, and alteration of the armament on the coasts in the general region of their establishments has produced very satisfactory results.

Erosion.—The advantage in greatly increased accuracy life predicted in my report for the year 1906 from the adoption of a large-caliber low-velocity gun in lieu of one of smaller caliber and high velocity with equal armor-penetrating power has been realized in extensive firings made with a service 14-inch gun. The results in firing 123 rounds from a 14-inch 2,150-feet-per-second gun indicate that its accuracy life will be approximately four times that of the 12-inch 2,500-feet-per-second gun which it was designed to supersede. The department is continuing its general investigation of the cause of erosion and its search for means of further prolonging the accuracy life of cannon.

Heat cracks in cannon.—An examination of the metal removed from the inside of badly eroded seacoast cannon while being bored out for the insertion of a lining tube has indicated the presence of heat cracks to such an extent as to justify the use of the double tube employed in all 14-inch seacoast guns with a view to preventing the spread of the heat cracks beyond the limits of the liner. Photographs of rings of metal taken from various parts of the bore of a 12-inch gun that had been fired 239 rounds, together with the results of tests of such metal, are exhibited in Appendix II [1] of this report.

The presence of the lining tube is further advantageous in that it facilitates the work of relining by making it possible to drop the original liner out of the gun by merely flowing cold water through the bore after the gun and liner have been moderately heated.

Gun construction.—The gun factory at the Watervliet Arsenal, in so far as concerns the production of large-caliber guns and mortars, has been running at something more than its eight-hour capacity during the past year, two and even three shifts having been employed on some of the work. The output has included Navy guns, both new and relined, in addition to Army guns and 12-inch mortars. The

[1] Omitted.

wire-wrapped type of construction employed for all Army guns and mortars of 6-inch caliber and greater has continued to give excellent satisfaction both as regards cost and efficiency.

New design of 12-inch mortar.—A number of the more powerful 12-inch mortars of new design referred to in my last annual report as being under manufacture for the fortifications of the Panama Canal have been completed and successfully tested. They will have a maximum range of slightly more than 11 miles, as compared with approximately 8½ miles for the most powerful type previously in use.

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Gun-forging plant at Watertown Arsenal.—There is being installed at the Watertown Arsenal a forging press of sufficient capacity to enable the department to take up the work of manufacturing the forgings used in the construction of mobile guns and howitzers. On account of the excellent facilities at that establishment for the manufacture and test of steel, it is hoped that improvement in the quality of gun steel may result from the undertaking of its manufacture there. The work will also enable the department to secure accurate data as to the cost of manufacture, and by enabling it to manufacture its own gun forgings, if reasonable prices are not quoted by bidders, may result in the lowering of bids for such material.

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Searchlights for examining the bores of cannon.—In order that the bores of cannon may be thoroughly inspected there has been developed and issued for use in each armament district a searchlight device consisting of a mirror of moderate magnifying power, equipped with electric lights and suitable shades. The whole is mounted on a fixture fitting the bore of the gun and is provided with a long staff for sliding it through. By means of a pair of moderate-power field glasses a good view can be obtained of the surface of the bore. Photographs taken by the aid of this device have been found to bring out small details and to be useful in studying suspected defects.

Subcaliber guns for mobile artillery.—There has been developed for use with mobile artillery, especially with the larger-caliber howitzers, a 1-pounder subcaliber gun and an explosive projectile containing a bursting charge of black powder or other smoke-producing material sufficient to make the point of impact clearly visible. By means of a subcaliber gun of that character it is expected to secure valuable training in the operation of the piece and in the conduct of fire without the expenditure of so much of the more expensive service ammunition.

Effort is being made to obtain greater uniformity in ranges than has been customary with this caliber of gun in the past. With this in view a heavier projectile is being tested. If it proves satisfactory, it will permit the carrying of a larger bursting charge and thus advantageously increase the visibility of burst.

GRENADES.

Simulated bursts of shrapnel.—Devices of the nature of smoke grenades, referred to in my last annual report as having been developed for use in field artillery exercises, have been further perfected

and their use greatly extended. A rifle-grenade type of the device permits securing great variations in height of burst, while the less expensive pole type permits satisfactory training in the other features of observation of fire. These devices have been found to give excellent preliminary training to officers in the observation and control of fire without the expenditure of the more expensive service ammunition.

SMOKELESS POWDER.

Powder board.—The Joint Army and Navy Board on Smokeless Powder, consisting of officers of this department and of the Navy Bureau of Ordnance, has continued its work during the year, with a view to improving the quality and cheapening the cost of manufacture of smokeless powder. No important change has been made in the specifications, although a few changes of minor importance have been recommended and adopted. Improvement in the product and increased economy in the manufacture of powder have accompanied the year's work.

Regulations for care and test of smokeless powder.—An important set of regulations for the care and test of smokeless powder and other explosives at ordnance establishments and in service was published during the past year. With a view to insuring satisfactory storage conditions and the safety of personnel, these regulations prescribe in great detail the storage conditions, and provide for frequent observation and test of the smokeless powder and other explosives in store. Provision is made for a monthly test, by a local artillery officer, of a small sample of each lot of powder in each magazine. In order that the samples may accurately represent the condition of the powder in the charges in storage, fresh ones are taken every six months from separate loading ammunition and every year from fixed ammunition; the powder in the latter class of ammunition being better protected and the obtaining of a sample more difficult.

In addition to these tests in service, each lot of powder, the lots varying from 25,000 to 100,000 pounds, depending upon the caliber, is kept under observation and continuous test at ordnance establishments. The results of these tests are plotted graphically on a record card in such a way that any dangerous tendency in the stability life is made plainly evident by a downward tendency of the corresponding curve.

Stability life of smokeless powder.—The service smokeless powders, with the exception of a few lots injured by being kept too long in the dry houses, have been found to have a very satisfactory length of stability life. There are a number of lots now in service manufactured in 1900 and apparently in good condition. Powder manufactured since 1908 is expected to have even a considerably longer stability life, due to the introduction of a stabilizer not previously used. On account of its great age and possible tendency to spontaneous combustion it was found advisable to withdraw from service all cannon powder of nitroglycerin composition, all such having been manufactured prior to 1900, at which time the composition was changed to nitrocellulose.

Improvements in smokeless powder.—The department has continued throughout the year investigations and tests with a view to

improving the quality and ballistic uniformity of smokeless powder for cannon. The tests with a view to increasing the ballistic uniformity by running the powder through the blending tower several times, referred to in my last annual report, have indicated that the improvement in blending thus secured would probably be fully offset by the bad effect of the increased time of exposure to varying weather conditions. It has been determined that the moisture absorbed in the grains or condensed on the surface during several hours' exposure to a saturated atmosphere will cause a material drop in muzzle velocity. Tests made to determine the probable amount of moisture absorbed or condensed on the surface of powder during the time ordinarily occupied in blending the powder at fortifications have indicated that, if the blending is done on a dry day, there is little moisture taken up. Other tests have indicated that little moisture is taken up by powder stored in containers that are not air-tight. This is probably due to the fact that the air changes slowly within the containers and moisture is consequently very slowly introduced. As the results obtained were somewhat inconsistent these tests are being repeated.

Manufacture of smokeless powder.—Due to a provision in the act making appropriations for fortifications and other works of defense, approved February 13, 1913, requiring, in effect, that the Army Powder Factory shall be operated at not less than one-half its capacity, the department will manufacture during the next year all the smokeless powder for which funds were provided at the last session of Congress, except a very small quantity of revolver powder and blank-ammunition powder, of a character which the department is unable to produce. This provision of law, unless repealed, will result in private manufacturers receiving no orders and thus giving up the making of powder for this department. This will throw the department upon its own resources in maintaining the standard and in improving the quality, except for such assistance as may be obtained from the Navy. This condition is believed to be an undesirable one, since it largely removes the stimulus of competition, and loses to the department the great advantages that have heretofore come through the work of the extensive laboratories and large force of skilled experts in the employ of the powder manufacturing companies. It appears significant in this connection that the government monopoly in the manufacture of powder has recently been abolished in France as the result of disastrous experience. It is thought that the wisest policy is for Congress to fix what it considers a reasonable price for powder to be furnished by contractors and with that restriction to authorize the department to give them a fair share of the work of manufacture.

High-explosive plant.—There has been installed at the Picatinny Arsenal and put into operation during the past year a plant for the manufacture of the high explosives needed by the department. It has been thus far chiefly engaged in the manufacture of the material used as a bursting charge for armor-piercing projectiles. The product has been satisfactory and the cost materially below that paid contractors. The capacity of the plant is sufficient to meet the expected needs of the department for this material and to some extent for other explosives.

Nitric-acid plant.—There has been procured during the past year for installation at the Picatinny Arsenal the equipment for the production of the nitric acid used in the manufacture of the pyrocellulose constituting the principal ingredient of smokeless powder. By means undoubtedly of this plant a reduction has been secured in the price of nitric acid, with a corresponding reduction in the cost of smokeless powder. Due to the low bids received since the procurement of this equipment, the manufacture of nitric acid has not been undertaken, but this can be done at any time that it may appear advantageous.

AMMUNITION FOR CANNON.

Projectiles.—The work of preparing all projectiles in service for the long-pointed caps to be added as soon as the emplacement hoists shall have been modified to accommodate them, has progressed satisfactorily and is now nearly completed. These caps will, by lessening the air resistance, materially increase the extreme range and the armor penetration of projectiles. A satisfactory type of cap, which can be manufactured at a reasonable expense, has been developed and tested, and its manufacture in quantity is now being undertaken.

High-explosive shrapnel.—The department has not yet been completely successful in developing the 3-inch high-explosive shrapnel referred to in my last annual report. Small sample lots have proved entirely satisfactory, but trouble has been encountered with the ballistic samples representing the first lot manufactured in quantity. An investigation is now in progress which it is hoped will determine the cause of recent difficulty and will justify again pushing the work of manufacture. The 10,000 3-inch high-explosive shrapnel purchased about one year ago from abroad have been issued to the service, and steps are being taken toward the procurement of 10,000 additional ones, pending the overcoming of the difficulties that have been encountered in their manufacture in this country.

Shrapnel cases from bar stock.—Additional machinery is being installed at the Frankford Arsenal for the manufacture of shrapnel cases of 3-inch, 4.7-inch, and 6-inch calibers from bar stock, experience with that previously installed having shown that cases of excellent quality can be so manufactured at much less than the current market prices. The inauguration of this work at the Frankford Arsenal and the adoption of similar methods by some of the contractors have already resulted in a notable decrease in the price quoted for such material.

Distance wadding.—During the past year an improvement has been made in the character of the distance wadding or material used to fill the space not fully occupied by the powder charge in fixed ammunition. Due to the possibility of the presence of objectionable foreign substances, or of the development of acetic acid, the use of excelsior has been abandoned and a cylinder of stiff cardboard cut to an appropriate length substituted therefor. The end of the cylinder nearest the smokeless powder is closed by a cardboard disk fastened thereto. The cylinder and disk are dipped in hot paraffin to make them moisture proof.

Hermetically sealing powder charges in fixed ammunition.—It having developed that the joint between the projectile and cartridge

case in fixed ammunition was not always moisture proof, a metal diaphragm is now soldered into the case over the powder charge prior to inserting the projectile. This device keeps the powder charge sealed during the time when the ammunition is carried in limbers or caissons, as well as when stored in leaky boxes.

Projectile plant.—There has been installed at the Watertown Arsenal during the past year, and recently put into operation, a plant for the manufacture of armor-piercing and deck-piercing projectiles for seacoast guns and mortars. The results obtained in the firing tests thus far made with projectiles manufactured therein are very promising, the indications being that the department will be able to produce projectiles of excellent quality at a considerably less cost than it has been paying private contractors. It is hoped that improvement in the general quality of projectiles will result from the investigations which the department will be able to make in connection with this work.

Cartridge storage cases.—Important improvements have been made during the past year in the cylindrical metal containers or cartridge storage cases used to hold and protect from moisture the thousands of rounds of smokeless powder in storage at fortifications. It having been found difficult to maintain in an air-tight condition the former type, in which the cover was held in position by a strip of metal soldered in place, an improved rubber gasket type has been adopted in which the cover is secured by a bar engaging under lugs on the case. The handles will in future be omitted from storage cases, they having been found to cause the development of leaks during the rolling of the cases from place to place.

In order to insure the early detection and correction of leaks developed during transportation, testing sets have been manufactured and issued to each of the coast defenses for use in testing each case in a powder shipment immediately upon its receipt at the fortification. These precautions are expected to result in more uniform ballistics and in a longer stability life for the powder.

AUTOMATIC MACHINE RIFLES.

The automatic machine rifle, caliber .30, model of 1909, has now been in the hands of troops approximately a year and a half. The field use of the automatic rifle developed the fact that the endurance of the extractor and firing pin as originally made was not satisfactory. As a result of exhaustive trials and tests, probably the most severe that any type of automatic machine gun has ever been subjected to, a new model of extractor has been adopted. This new extractor, as well as a different steel and heat treatment for the firing pin and a slight change in the timing of the action, were used on 100 of these rifles, altered and issued to the service. During extensive firings of these rifles at the Armory no jams and hardly any breakages occurred, although the firings were most severe and thorough.

A board has been convened at the Springfield Armory for a competitive test of new automatic rifles. This board will also consider the type of mount best suited to the needs of the service.

MOUNTAIN ARTILLERY.

One battery of new 3-inch mountain howitzer matériel, referred to in my last annual report as undergoing test, will be issued in the near future to the Fourth Field Artillery for a service test before undertaking manufacture in quantity.

All of the 2.95-inch mountain guns have been provided with panoramic sights and range quadrants which will permit the use of the same system of fire as that of the field batteries and will increase to a great extent the efficiency of this matériel pending the manufacture of the modern 3-inch mountain howitzer batteries.

PACK OUTFITS.

For 2.95-inch Vickers-Maxim mountain-gun matériel.—As a result of the 1,000-mile march of the battalion of Field Artillery in the summer of 1912, the Field Artillery Board made definite recommendations for the equipment of the mountain artillery. The necessary parts to complete the equipment of one regiment in accordance with the recommendations of the Field Artillery Board have been completed, and the full equipment is under test by the Fourth Field Artillery.

Spare parts for pack outfits covering contemplated issues during six months' service in the field are being manufactured as a war reserve. These parts, when completed, will form part of the ordnance depots attached to each division.

For fire-control equipment of mountain batteries.—The pack equipment for fire-control matériel for mountain batteries has been manufactured for one regiment and is being tested in connection with the full regimental equipment referred to above.

FIELD-GUN MATÉRIEL.

The conversion of the 3.2-inch gun batteries to 3-inch of modern design continues at the rate permitted by appropriations.

Orders have been placed for the manufacture of a pilot 3-inch carriage of a new design. This new type carriage conforms to the latest developments in field matériel in permitting higher elevations and greater traverse on the carriage without moving the trail.

Two batteries of 4.7-inch gun matériel have been issued to the service.

Tests of a Deport field gun and carriage, purchased under an allotment by the Board of Ordnance and Fortification, have been made during the past year.

Designs are in progress, and manufacture will shortly be undertaken, of a new limber and caisson for 3-inch batteries, the caisson chest of which will open to the front.

HOWITZER MATÉRIEL.

The test of the 3.8-inch howitzer carriage referred to in my previous report has been completed and the manufacture of carriages in quantity has been undertaken. Two batteries of the 6-inch howitzer ma-

tériel, and two of the 4.7-inch howitzer matériel, have been issued to the service. A new type of 4.7-inch howitzer carriage has been tested, and manufacture of additional batteries of this matériel will be continued as fast as funds will permit. New designs of limbers and caissons for the 3.8-inch and 4.7-inch howitzer batteries have been completed and tested. These vehicles are arranged so that the caisson chests open to the front, instead of the rear as previously.

SUPPLY OF MOBILE ARTILLERY.

As stated in my last annual report, the supply of this class of equipment is less satisfactory than that of any other furnished by the Ordnance Department, except the ammunition for field artillery. The appropriations for the last two years for this purpose have been somewhat larger than for several years prior to that time, but it is hoped that still larger annual appropriations may be made, as even the present rate is not such as to provide a sufficient amount within a reasonable time.

COAST ARTILLERY PRACTICE.

Behavior of matériel.—Reports received during the year show continued improvement in the results of Coast Artillery target practice and, except for the accident at Fort Moultrie referred to elsewhere, satisfactory behavior of the ordnance matériel used in that work. With a view to reducing the expense for targets, thus making additional funds available for the procurement of ammunition, no more of the large-size targets, 30 feet by 60 feet, are to be manufactured for issue. It is now proposed to return to the exclusive use of the small-sized pyramidal target.

Broad-banded projectiles.—The records of this office indicate that practically all the former narrow-banded cast-iron projectiles in service have been expended, so that in future only the broad-banded type will be used. Due to improvements in design and manufacture, whereby greater uniformity of weight and finish have been secured, these projectiles are expected to result in greater uniformity of ranging.

FIELD-ARTILLERY PRACTICE.

Behavior of matériel.—Target-practice reports submitted during the year indicate that the field artillery guns, carriages, and ammunition are giving general satisfaction in service. The records of this office indicate that all the old 3-inch shrapnel in service manufactured prior to 1907 will be expended during the current year's target practice, thus leaving on hand only shrapnel of the better type and later manufacture. The same condition prevails concerning the old type of ammunition formerly in the hands of the 2.95-inch mountain batteries.

School of fire.—The increase of $20,000 in the appropriation carried by the fortifications act approved June 6, 1912, has permitted an increase in the allowance of 3-inch ammunition issued for expenditure at the School of Fire for Field Artillery. The total allowance of 3,000 rounds available for expenditure at that place was sufficient to give only approximately 60 rounds for each of the officers under

instruction at the school. This amount is evidently inadequate, and recommendation has been submitted for an increase in the estimates by $10,000. This would be sufficient to provide approximately 40 additional rounds per officer for the usual number of students annually at the school.

Fuze setters.—A new type of hand fuze setter has been perfected during the year and is now being manufactured in quantity for issue to the service. It is an improvement over the former type in giving greater power and greater accuracy in the results.

New-type mobile artillery targets.—There have recently been adopted, and are under manufacture, new types of mobile artillery targets as a result of experiments at the School of Fire for Field Artillery. These targets include sleds, frames, and other parts necessary for simulating movements of infantry, cavalry, and field artillery. By means of such targets it is expected to greatly increase the interest and value of the annual target-practice work.

ARMY POWDER FACTORY.

The Army powder factory is located at the Picatinny Arsenal, which is also the principal depot of the department for the storage and issue of powder, ammunition, and high explosives.

Approximately 415,000 pounds of cannon powder and 133,000 pounds of caliber .30 and other small-grained powders were manufactured during the year. The factory cost of the cannon powder has been reduced during the year from a little less than 36 cents per pound to a little less than 35 cents per pound.

A total of approximately 1,950,000 pounds of cannon powder and 235,000 pounds of caliber .30 powder have been manufactured since the factory was put into operation in the month of June, 1908. The factory cost of this powder has been approximately $935,000, which includes fire losses. If this powder had been procured by contract at prevailing prices, it would have cost about $1,375,000. The saving has therefore been approximately $440,000.

The capacity of the powder factory is now approximately 9,000 pounds per day of 24 hours, for approximately 300 days per year, thus allowing time for repairs, holidays, etc. The equipment is being procured for reworking any very old powders that may show signs of serious deterioration. They can thus be remade into new powder of excellent quality at approximately one-half the cost of entirely new powder.

The work of installing a high-explosive plant is in progress and will be completed during the current year. The work of manufacture referred to elsewhere is now being carried on in an experimental plant of temporary construction.

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IMPROVEMENTS IN INSTALLED SEACOAST GUNS AND CARRIAGES.

The modification of seacoast matériel of the older designs is very desirable, since by the expenditure of a small percentage of their cost the carriages can be made almost equal in efficiency to the latest

models. The benefit that would accrue is very large compared with the cost. Those carriages which have to date been modified are giving excellent service. Complete designs are on hand for matériel which can not now be modified on account of lack of funds. As these carriages can be used in their present condition, the necessity for their modification is not as urgent as the need for increasing the reserve of Field Artillery matériel. The estimates for the alteration of seacoast armament have therefore been reduced to a minimum, while the estimates for Field Artillery have been increased. Sufficient funds have been available during the past year for the modification of forty 15-pounder balanced-pillar carriages to provide them with new telescopic sights and improved elevating and traversing mechanisms. The modification of the remainder of these carriages will be continued as funds permit. The modernizing of all 10-inch disappearing carriages, model of 1894, has been completed.

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ROCK ISLAND ARSENAL.

This arsenal was commanded during the year by Lieut. Col. George W. Burr, who is also ordnance officer of the Central Department.

The number of receipts and issues of ordnance stores is not materially different from last year, but the number of shipments is somewhat less, due in part to the absence of so many troops from the Central Department and in part to the operation of General Order No. 25, War Department, 1912, which requires issues of personal and horse equipments and cleaning and repairing materials to post ordnance officers, instead of organization commanders. The absence of troops from the Central Department has resulted in larger issues to other arsenals for reissue. This branch of the arsenal's business therefore remains essentially the same.

Additional storage space.—The increasing use for shop purposes of the buildings formerly used as storehouses has emphasized the need of additional storage capacity at this arsenal. Unless emergency provision for shelter can be made, much valuable artillery matériel will have to be stored in the open. In 1900 there were available for storage purposes 1,025,384 square feet of space. Due to the occupancy for shop purposes of buildings temporarily used as storehouses, at the present time approximately only 304,568 square feet remain available. In war emergency, with shop expansion imperative, the storehouse situation at this arsenal would be almost hopeless.

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Scientific management.—The work of installing the systemization and standardization features of the Watertown Arsenal system or shop and storehouse management, begun at this arsenal in September, 1911, has made gratifying progress during the year. The responsible employees are gradually becoming familiar with the new methods and are appreciating their advantages. The engineering division is completely organized and is handling all expenditure of operation orders—a task of magnitude, as 679 expenditure orders were issued during the year. The planning room has completed

route sheets and assembling charts for many of the arsenal's most important manufactures. It has materially increased the output and decreased the cost by improved methods. The suggestion by the planning room of improved methods of doing work has made the foremen more alert, and more suggestions than formerly for increasing production are received from them. The following are a few of the many cases of reduction of cost of work as a result of the new system:

Name of article (parts of 3-inch field gun carriage).	Former price.	Present price.
Cylinder head	$4.25	$2.41
Cylinder end	2.08	.87
Cylinder-end stud	3.25	1.35
Elevating bevel gear	4.00	1.81
Piston	2.25	1.04
Hub cap	.35	.14
Tie-rod clamps	.25	.16
Sight-bracket support, rear	2.00	1.55
Sight-bracket support, front	1.75	.95
Axle bearing	10.25	8.50
Pintle	25.00	15.00

All of the raw material which was stored in the attics and storerooms of the different departments has been brought together in the material storehouse and entered on balance of stores records. As a result large quantities of material which had been considered obsolete by one department have been, and are being, used in other departments. Similarly, all steel and brass formerly variously stored have been collected in the steel storeroom, from which issues are made as required. The new storehouse methods developed that large quantities of steel and other materials were on hand which will now be utilized, where suitable, before further purchases are made. The saving to the Government from bringing to attention and using these forgotten or supposedly obsolete materials is difficult to estimate, but, unquestionably, is very large. Nearly all requisitions for material are now furnished by the Balance of Stores Division, greatly reducing the number of requisitions, and resulting in the purchase of material in larger quantities at correspondingly lower prices. This concentration of responsibility for the maintenance of stock also more certainly insures raw material being on hand when required for manufacturing purposes. The Cost and Time Division is well organized and making commendable progress in securing accurate costs of all articles fabricated. While much remains to be done before the system can be regarded as fully installed, the progress made, and the economical results obtained, in the 21 months since it was started can not but be regarded as most satisfactory.

Safety devices.—Continued attention has been paid to the reduction of the number of preventable accidents to employees by the provision of adequate safety devices. Open belts and exposed countershafts have been boxed, exposed gears covered with metal guards, band saws protected by wire guards, emery wheels shielded and frequently inspected, punch presses fitted with safeguards and with knockouts for removing the work without hazarding the operator, strawboard disks placed in the pulleys of belt polishing machines to

protect the workmen's fingers, and improved safety arrangements provided for the acid baths in the plating room. First aid is given all injured employees, however slight the injury, and record made of the case. Inquiry is then made to determine whether repetition of the accident can be prevented by mechanical device, and if so the safety device is provided.

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Armory shops.—The armory shops have been operated during the year with a gradually decreasing output, and with the purpose of completing the orders in hand and entirely discontinuing the manufacture of small arms at this arsenal some time this fall. Nineteen thousand three hundred and sixty-four United States rifles, caliber .30, model of 1903, and 19,115 bayonets, model of 1905, have been manufactured. In addition many spare parts have been fabricated and a large amount of repairs completed. The cost of the rifle under the last order, completed April 15, 1913, was $13.96.

Arsenal shops.—The shops include the mobile artillery vehicle shops; harness shop, with leather and cloth departments; blacksmith shop; foundry; equipment shop; tin shop; polishing and plating shop; and the woodworking and painting shops. The output of these shops for the year has embraced a great variety of articles, including the manufacture and alteration of carriages, limbers, caissons, battery wagons, store wagons, and reels and carts for mobile artillery, the manufacture of Artillery harness, pack outfits for mountain artillery and machine guns, horse equipments for Cavalry, personal and mess equipments for all arms of the service, targets and target-practice supplies, marksmen's insignia, cartridge storage cases, and other material for Coast Artillery, in addition to the repair for reissue of unserviceable but repairable material of these different kinds turned in by the service for that purpose. Much experimental work of all kinds has been done. All of these departments have been very busy during the year. The shop equipment has been kept in good condition and up to date.

Aside from the quantity and variety of work continuously in progress in these shops during the year, a prominent feature of their operation has been the continued effort for improved methods and designs and proper economies. A few instances are here given: The substitution for manufacturing purposes of commercial gas, purchased locally, for gas made from gasoline, has resulted in a saving of $311 per month; the design of an improved currycomb without leather back, lighter and much more compact than the present model, which can be fabricated for about 15 cents, as compared with a manufacturing cost of 59 cents for the present model; the development of a machine method of dubbing leather, replacing the old hand method, which greatly reduces the cost of this operation; the use of cuttings from occasional spoiled impressions of the printing machine, in place of new paper, for wrapping targets, has resulted in a saving of 30 cents per 1,000 targets; a wooden fencing sword has been designed, following the lines of the new Cavalry sword and of a design permitting the use of machine finishing at a cost of $0.068 each, compared with $0.1736 for the old model.

The following tabulation shows the reduction in cost of manufacture of a number of representative articles with the cost for the preceding year or with that under the last order fabricated:

Article.	Former price.	Present price.
Miniature targets for Hollifield rifle-rod outfits, per M.	$1.00	$0.23
Artificer's chests, model of 1910, each.	31.15	21.22
Target pasters, per million.	20.42	10.12
Limber-pole bodies, without ferrules, each.	25.51	24.96
Paper targets, 6 by 6 feet, per M.	40.49	39.74
Protecting stick for pack outfits, per C.	54.45	47.80
Intrenching shovels, do.	51.65	49.95
Forge and bellows, do.	1,793.00	1,370.00
Wire traces for Artillery harness, do.	510.31	500.59
Lead-rein rollers, do.	9.61	5.61
Trace chains, do.	55.35	49.55
Cavalry canteen snaps, do.	4.94	4.41
Spur buckles, model of 1911, do.	10.00	8.35
Covert snaps for halter tie ropes, bronze plated, do.	15.00	6.90
4.7-inch gun carriage, model of 1906, each.	4,925.25	4,361.18
4.7-inch gun battery wagon, 4.7-inch gun and 6-inch howitzer forge limbers, model of 1908, each.	4,606.08	3,663.59
4.7-inch gun store wagon and 4.7-inch howitzer store limber, model of 1908, do.	4,417.80	3,599.21
Feed bags, model of 1912, do.	1.16	.98
Cleaning leather, backs, per C.	2.48	.29

Field Artillery plant.—The sundry civil act approved June 23, 1913, carries an appropriation of $250,000 for increasing the capacity of the Field Artillery plant at this arsenal. It is intended to extend the mobile artillery plant to include all of Shop I building, transferring the harness shop from Shop I to Shop K, which latter has heretofore been used as a storehouse. Plans for heating and lighting and for office, sanitary, and other facilities required to fit Shop K for its new use have been prepared, and the work is being prosecuted.

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SPRINGFIELD ARMORY.

The armory was commanded up to September 1, 1912, by Col. S. E. Blunt, on which date he was retired at his own request after 40 years' service, and since that date by Lieut. Col. W. S. Peirce.

Grounds and buildings.—Automatic sprinkler systems have been installed in the two principal storehouses during the past year. Estimates for similarly equipping the other storehouses have been submitted. When this work shall have been completed, it is believed that the valuable buildings and property at this armory will have as high a degree of protection against fire as can be given by any kind of apparatus.

Manufactures.—During the year 38,070 United States rifles, caliber .30, model of 1903, were manufactured, and 3,801 cleaned and repaired. There were also manufactured 40,609 bayonets; 3,333 bolos, model of 1909; 8,335 bolos, model of 1910; 3,700 Hospital Corps knives; 8,471 Cavalry saber scabbards; a considerable number of sets of spare parts for the service rifle and the automatic machine gun, caliber .30, model of 1909, besides small quantities of various other articles. Two hundred and fifty automatic machine rifles, caliber .30, model of 1909, the manufacture of which had been begun in the preceding year, were also completed.

The preparation of tools, fixtures, gauges, etc., for the manufacture of the automatic pistol, caliber .45, model of 1911, has been practically completed and the manufacture of 11,285 pistols begun. The plant will have a capacity of 40 pistols per day of eight hours.

The tools, fixtures, and gauges required for the manufacture of 125 of the new Cavalry swords per day have been completed. Work has been begun on an order for 20,000 of these swords, and a number sufficient to arm two troops of Cavalry has already been completed.

Cost of manufacture.—During the year several improvements in methods of manufacturing the service rifle have been introduced which effect a saving, but due to the decrease in the total amount of manufactures at this armory the shop-expense factor has been increased sufficiently to offset the savings made. The work of preparing tools, fixtures, and gauges for the automatic pistol and new Cavalry sword, as well as the experimental work in developing the alterations in the automatic machine rifle, have so occupied the attention and time of all concerned that the subject of improvements in the manufacture of the magazine rifle has not received the usual study. This work will, however, be resumed during the coming year, although it is believed that the present cost of the service rifle can not be materially decreased without affecting the quality of workmanship.

Experimental work.—During the year endurance tests of automatic machine rifles, caliber .30, model of 1909, have been made to test the action of altered parts. The following-named articles have also been tested and reports thereon rendered: Schouboe automatic pistol, Siebold armor waistcoat, Bang automatic rifle, Moore silencer, Maxim silencer for automatic machine rifle, Becker steel shield, and Steyr automatic pistol.

Inspection of outside manufactures.—During the past year the inspection of articles manufactured under contract at Worcester, Mass., Hartford and Bridgeport, Conn., and vicinity has been performed by officers from this armory. The total value of all material inspected was $1,051,468.86.

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FRANKFORD ARSENAL.

This arsenal was commanded during the year by Lieut. Col. George Montgomery.

Fiscal and property transactions.—The value of the ordnance property manufactured during the year was $1,197,536, and the value of the property remaining uncompleted at the end of the year was $2,781,867.51. The number of manufacturing orders was 1,424. The amount disbursed was $1,928,510.97, and the corresponding number of vouchers was 3,166. The amount of the purchases was $2,209,113.88, and the corresponding number of purchase orders was 4,905. The weight of property shipped during the year was 11,371,651 pounds, and the weight of that received was 30,525,347 pounds. The corresponding number of vouchers was 5,400, and the number of items of accountability on the return was 10,900.

Administrative methods.—The overhauling of materials and supplies for manufacturing operations was completed during the year,

which comprised fixing the maximum and minimum limits for every item of stock and the installation of the necessary records for the operation of the system. The system by which the manufacturing operations of the arsenal are conducted, so that the prescribed quantities of materials and supplies are utilized for their intended purpose, has been quite successful, but much remains to be done toward perfecting the personnel engaged on the work. The use of the stock fund for sorting, inspecting, and repairing old materials received from the service has been remarkably successful in that it has enabled this arsenal to separate this character of work from straight manufacturing, so that economical methods can be separately introduced. The pattern system referred to in the last annual report has proved to be expeditious and economical in the furnishing of patterns for any desired object.

The purchase of coal according to the quantity of water that it may evaporate has proven to be very economical. The intelligent purchase of coal and a more efficient feed-water heater have led to a saving of nearly $1,800 during the six months of operation.

Shop management.—The average number of employees at the beginning of the year was 1,411; on December 31, 1912, 1,287; and at the end of the year the number was 1,631. Their total compensation for the year was $907,805.49.

The system of shop management introduced during the preceding year in connection with the manufacture of small-arms ammunition proved to be entirely successful. A planning room has been established to regulate the manufacture of artillery ammunition, which is a modification of that used to regulate the manufacture of small-arms ammunition. The records reaching the planning room are, however, only of the beginning and final operation on each component; but a record is moved with each component which gives the number of the various operations performed on it, which is available for the information of the foremen in handling the orders.

The Taylor system of shop management has been installed to control the manufacture of fire-control instruments, sights, etc., so that the work is now planned and controlled entirely from the planning room. The machines have not, however, been altered to give the maximum production, nor has the method of distributing the shop expenses more scientifically been established, nor has the premium system of compensation been introduced.

Manufacture of small-arms ammunition.—There were manufactured during the year 52,992,180 ball cartridges, 5,010,964 blank cartridges, 107,316 dummy cartridges, and 214,500 guard cartridges for the service rifle. There were also manufactured 6,932,380 revolver ball cartridges, caliber .38; 488,840 revolver ball cartridges, caliber .45; and 4,973,660 ball cartridges for the caliber .45 automatic pistol.

The average accuracy for all rifle ammunition manufactured during the year showed a mean radius of 4.045 inches, as compared with 4.132 inches of last year. The average total cost of the manufacture of rifle ball cartridges was $27.08 per thousand, as compared with $24.42 per thousand of last year. The increase in cost was largely due to higher costs of materials and smaller orders, there being approximately a reduction of 9,000,000 in the quantity of rifle ball ammunition manufactured during the year. The average cost of rifle ball ammunition procured from private manufacturers was $38.06

per thousand. The average cost of pistol ball ammunition was $16.28 per thousand, as compared with $15.84 per thousand for last year. This increase has been entirely due to increase in shop expenses. The average cost of pistol ammunition, caliber .45, purchased from private manufacturers, was $18.75 per thousand. Considerable embarrassment was caused during the latter part of the year by the failure on the part of a contractor to furnish cupro-nickel of the standard specifications. It is a matter of regret that satisfactory cupro-nickel can be furnished only by a limited number of concerns in this country.

Manufacture of Artillery ammunition.—The principal output of Artillery ammunition was 12,588 fixed common shrapnel; 9,709 fixed high-explosive shrapnel, Ehrhardt design; 2,000 fixed blank saluting charges, and 15,026 cartridge cases, all for 3-inch field gun; 1,800 fixed cast-iron shell for 6-pounder gun; and 1,046 fixed common steel shell; 3,603 fixed cast-iron shot for 3-inch (15-pounder) gun target practice; 3,000 fixed common steel shell and 2,438 fixed common shrapnel for 4.7-inch gun; 6,873 21-second combination fuzes; 1,026 31-second combination fuzes; 11,364 base detonating fuzes, medium caliber; and 4,094 base detonating fuzes, major caliber.

The accuracy of the 21-second combination fuze has shown its superiority over the only one manufactured by an outside concern with which it entered into competition.

The costs of Artillery ammunition show generally a slight reduction over the costs of the preceding year, although the department engaged in this work had the disadvantage that it was not working at its capacity during the early part of the year and had to contend with considerable reorganization due to transfer of machinery. The costs of Artillery ammunition compare most favorably with prices paid private manufacturers for corresponding material. 21-second and 31-second combination fuzes are manufactured for $2.05 and $3.15 each, respectively; the last quotations received from private manufacturers were $4.30 and $7 each, respectively, but no orders were placed. Fixed high-explosive shrapnel for 3-inch field gun can be manufactured at a total cost of $10.15 each; shrapnel procured abroad and assembled here cost $13.42 each. The 3-inch common shrapnel, without fuze, is manufactured at a cost of $4.62 each; under the last contract this cost was $5.79 each. Common shrapnel, without fuze, for 3.8-inch, 4.7-inch, and 6-inch guns and howitzers can be manufactured at a cost of $14.15, $21.70, and $33.93 each, respectively; the corresponding contract prices are $17.50, $25, and $37 each, respectively. The manufacture of shrapnel from bar steel is no longer experimental, and the necessary machinery to largely increase production by this method has been ordered. The following reductions in costs are anticipated as a result of employing this method of manufacture: 3-inch shrapnel, $1.50 each; 3.8-inch, $5 each; 4.7-inch, $4.50 each; and 6-inch, $3 each. When the arsenal is working at its full capacity a reduction in cost of at least $200,000 would be effected in the manufacture of shrapnel. This method of manufacture was advanced and made successful by Maj. W. J. Hawkins, Ordnance Department. Considerable automatic machinery has been ordered for the manufacture of shrapnel and fuzes, which will increase the capacity of the plant for these articles from 25 to 40 per cent.

The quantity of explosive for small-caliber shell has been reduced so that in case of a premature explosion the gun will not be ruptured.

All mobile artillery shell are now tested hydraulically for the purpose of rejecting those that are porous. Mobile artillery shell are now manufactured, in limited quantities, with base plugs, which has the advantage of permitting the use of shell fillers in cartons. Cardboard distance wadding for propelling charges has been adopted, replacing excelsior, which is objectionable for many reasons. The loose igniter has been omitted in the case of the smaller calibers. A night tracer of the delay-pellet direct-ignition type has been developed, and tests have shown it to be satisfactory. A smoke-bomb apparatus for Field Artillery has been developed to a successful conclusion. An illuminating grenade, to be fired from the caliber .30 rifle, has given satisfactory results. Electric primers for Seacoast Artillery, of single-wire and two-wire combination, have been successfully developed.

Manufacture of instruments.—The principal manufactures of instruments consisted of, among other articles, 108 range quadrants, 25 elevation quadrants, 24 Warner and Swasey azimuth instruments, 115 sextant telemeters, and 26 panoramic sights. All instruments are now made dust and moisture proof, which has increased their cost, but should also materially decrease the charges for their maintenance.

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WATERVLIET ARSENAL.

This arsenal was commanded during the year by Lt. Col. W. W. Gibson, who is also a member of the Board for Testing Rifled Cannon.

Manufactures.—Extra shifts have been employed in the shops for work on 12-inch mortars, model of 1912; 14-inch Navy guns; and modifications of Army 14-inch guns, model of 1907 MI, and 12-inch mortars, model of 1908. The final eight of an order of sixteen 6-inch Navy guns to be relined have been completed. Five 14-inch Navy guns, out of an order of 6, have been completed and shipped; the sixth gun will be completed in a few months. Four 12-inch Navy guns have been lined and shipped. Four more of these guns are under repair in the shops. One 12-inch gun, model of 1895, has been lined and shipped, and two more are under way and will be completed in the near future. Work on the 14-inch guns, model of 1910, 12-inch mortars, model of 1912, and 6-inch guns, model of 1908, is well under way. Three of the mortars have been completed and shipped. Six 15-pounder guns, model of 1903; eleven 6-inch howitzers, model of 1908; and nineteen 3-inch field guns, model of 1905, have been completed and shipped. Work on the remainder of the 3-inch field guns, models of 1902 and 1905, has been delayed, due to delay in deliveries of forgings. On account of the length of time required to complete large gun orders, it has not yet been possible to make any extensive study of costs under the new system. A number of smaller orders have been listed, however, which furnish some basis of comparison. These show, in general, some reduction in the total labor cost, although in many cases the increased cost of materials has been marked. It is believed that it can be stated that the cost of production, considering the increase in the cost of labor and material, is less under the present system than it would have been under the old system.

Freight.—The total tonnage received and issued was slightly greater than during the preceding year, that received being 13,806,590 pounds and that issued 2,920,854 pounds.

Shop management.—The installation of many of those features of the Taylor system of shop management successfully tried out at the Watertown Arsenal has continued during the year.

Engineering division.—The engineering division and the property division have been consolidated. This change has been found very advantageous, since a large number of the papers handled in either one of these divisions must be handled in the other. The work of the engineering division is becoming more efficient as the personnel becomes trained and as former cost records accumulate. The discrepancies between the estimated and actual costs are becoming smaller and fewer in number. The work of this division shows a marked advance in efficiency during the year.

Operating department.—The shops have been operated during the year at a greater capacity than during the preceding year. The number of employees has been increased from 270, in July, 1912, to 314, on June 30, 1913. As regards the new system of shop management, certain difficulties are arising in the shops after the work has been put into the hands of the foremen. These difficulties have been complained of, and as a result a careful investigation has been made, with a view to obtaining the evidence of the foremen and others concerned in the actual work independently of the planning room. A study will be made of this evidence with a view to determining what remedies can be applied to correct the unfavorable conditions. These difficulties appear to have arisen from the fact that the trained officers in charge of introducing the system have not remained at this arsenal long enough to secure the results anticipated. Many minor changes and improvements have been made from time to time to increase the accuracy of the work, which is in a measure attested by the steady decrease in the cost of replacements. For the last seven months of the fiscal year ended June 30, 1912, the average monthly cost of replacements for the machine shop was $92.96. For the first 10 months of the present fiscal year this average monthly cost of replacements was only $38.21, although the volume of work was larger. The needs of this arsenal as to new machine tools have been fully stated in the estimates submitted.

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WATERTOWN ARSENAL.

This arsenal was commanded during the year by Lieut. Col. C. B. Wheeler, who is also armament officer of the Northern Armament District and a member of the Board for Testing Rifled Cannon.

The amount of work during the year, as measured by the total expenditures, was somewhat less than that of the previous year, although the value of the material completed, $1,271,700, was greater than that of the year before. The total number of employees at the end of the year was 573.

The principal operations have comprised the manufacture of seacoast gun carriages and parts required for the alteration and repair of carriages already in service. Gun carriages of the following types

were completed during the year: Mount for 14-inch gun turret, model of 1909; 14-inch disappearing carriage, model of 1907; 6-inch disappearing carriage, model of 1905 Mod. II; 12-inch mortar carriage, model of 1908; 6-inch barbette carriage, model of 1910; 12-inch mortar carriage, model of 1896 Mod. II; and 5-inch mounts, mark XIII, model 2, for the Navy Department.

Safety appliances.—Safety appliances for the protection of workmen have been installed during the year, so far as available funds have permitted, and further improvements of this kind will be made during the coming year. In connection with these improvements, the installation of metal clothes lockers and more modern workbenches in the machine shop has added to the general appearance of the shop and to the comfort of the workmen, and the workbenches, by providing suitable locked drawers for the safe-keeping of tools issued to workmen, have reduced materially the number of transactions in the tool-issue department.

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System of management.—The system of management at this arsenal, referred to in previous reports, has been continued in operation, with some minor extensions. The further and continued experience with the methods forming the basis of the system confirm my previously expressed opinion of its merits.

NEW YORK ARSENAL.

This arsenal was commanded during the year by Col. O. B. Mitcham, who also performs the duties of inspector of ordnance, ordnance officer of the Eastern Department, and armament officer of the Central Armament District.

The arsenal has no special facilities for manufacture or repair of ordnance matériel; its principal use is as a purchasing, receiving, and shipping depot. From its proximity to New York City its advantages as a purchasing and storage depot are manifest. As a depot for equipping troops, especially for military expeditions in time of war, its location renders it particularly valuable.

During the year 12,352 packages of stores were received, weighing 1,105,790 pounds. The number of packages issued was 14,524, weighing 1,551,177 pounds. The amount of funds disbursed during the year was $326,746.16.

AUGUSTA ARSENAL.

This arsenal was commanded during the year by Col. J. W. Bénet, who is also armament officer of the Southern Armament District.

The work of capping, grooving for base covers, and preparing for fuzes all armor-piercing and deck-piercing projectiles at the arsenal was completed during the year. All armor-piercing projectiles were rebanded with broad rotating bands and the short caps threaded for the attachment of a pointed cap. Two hundred cast-iron projectiles for target practice were cast in the foundry and finished in the machine shop. Other important items of work done in the shops were the manufacture of targets and parts of targets for seacoast artillery practice, the repair of parts for seacoast armament, and re-tiring ammunition truck wheels.

The disbursements for the year, exclusive of sales and deposits, amounted to $76,849.77. The number of receipts and issues of

ordnance stores during the year was 845. The stores received on quartermaster's bill of lading amounted to 716,446 pounds; the stores issued amounted to 1,416,676 pounds.

BENICIA ARSENAL.

This arsenal was commanded during the year by Lieut. Col. C. L'H. Ruggles, who is also ordnance officer of the Western Department and armament officer of the Western Armament District.

This arsenal is the depot of supply for the Regular troops and the Organized Militia within the territorial limits of the Western and Hawaiian Departments. The principal items of work done in the shops during the year were the modification of armor-piercing projectiles; the manufacture of targets and target material for seacoast artillery, mobile artillery, and small-arms target practice; the assembling of powder charges and fixed ammunition; and the manufacture of parts required for repairs and replacements of seacoast artillery matériel.

The main storehouse at this arsenal and its contents were destroyed by fire on October 18, 1912, entailing a loss of approximately $1,571,000. While the origin of the fire is uncertain, it emphasizes the need of additional fire protection. The sundry civil act for the fiscal year 1914 carries an appropriation of $6,000 providing for the installation of an automatic sprinkler system in the present main storehouse. The same act carries an appropriation for reconstructing the ruins of the burned storehouse into a building which will be used for storage purposes. The need of additional storage facilities at this arsenal has long been felt, but particularly since the destruction of the main storehouse by fire. Estimates have been submitted for a new general storehouse and a new and enlarged oil house.

The disbursements for the year amounted to $141,217.98. The number of requisitions received from the service during the year was 1,847. The number of bills of lading issued during the year was 1,146, and the weight of the stores issued was 6,053,637 pounds. The weight of the stores received was 6,076,018 pounds.

SAN ANTONIO ARSENAL.

This arsenal was commanded from July 1, 1912, to December 20, 1912, by Col. Charles H. Clark, and from December 21, 1912, to the end of the fiscal year by Maj. J. H. Rice. The commanding officer of this arsenal is also in charge of a field artillery district and has, since February 15, 1913, been ordnance officer of the Southern Department.

The arsenal has supplied the troops in the Southern Department with ordnance and ordnance stores, including the Second Division, which went into camp at Galveston and Texas City in the latter part of February.

PICATINNY ARSENAL.

This arsenal was commanded during the year by Lt. Col. Odus C. Horney. The Army powder factory is located at this arsenal, which is also a depot for the storage and preparation of powder, ammunition, and high explosives. Approximately 415,000 pounds of cannon

powder and 133,000 pounds of caliber .30 and other small-grained powders were manufactured during the year.

A new powder dry house, to replace one destroyed by fire on April 26, 1912, is being erected and will be completed within the next few months. It will be of hollow-tile and steel construction. While it would probably be seriously injured, if not entirely destroyed, by the burning of a considerable quantity of powder stored in it, there would be no danger from flying fragments of burning wood as exists in the case of other dry houses. The work of cutting down and manufacturing into railroad ties the dead and dying chestnut timber on the reservation has been going on continuously during the year.

The total disbursements of the arsenal during the year amounted to $425,505.42; the number of cash vouchers was 1,128; the number of receipts and issues of ordnance stores was 850; the weight of stores issued and received, exclusive of building materials and materials for manufacturing purposes, was 14,188,003 pounds. The number of employees on June 30, 1913, was 371.

MANILA ORDNANCE DEPOT.

The depot was commanded by Lieut. Col. J. W. Joyes from the beginning of the fiscal year until March 17, 1913, and since that date to the close of the fiscal year by Maj. H. W. Schull. The commanding officer of the depot is also ordnance officer of the Philippine Department, armament officer of the Philippine Armament District, and a member of the Defense Board of the Philippine Islands.

Volume of business.—One thousand six hundred and thirty-eight ordnance property returns were received and given preliminary examination, all irregularities being investigated by correspondence. The number of vouchers for stores issued was 1,323; and for stores received, 650. The weight of the stores issued amounted to 5,392,459 pounds, and that of stores received to 3,169,423 pounds.

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Very respectfully,

WILLIAM CROZIER,
Brigadier General, Chief of Ordnance.

The SECRETARY OF WAR.

REPORT OF THE CHIEF SIGNAL OFFICER.

WAR DEPARTMENT,
OFFICE OF THE CHIEF SIGNAL OFFICER,
Washington, October 10, 1913.

SIR: I have the honor to submit my annual report of the operations of the Signal Corps of the Army for the fiscal year ended June 30, 1913.

On February 13, 1913, my predecessor, Brig. Gen. James Allen, was retired from active duty by operation of law, after having served with fidelity and great distinction for more than seven years as Chief Signal Officer of the Army. On March 5, 1913, I assumed the duties of the position.

Before proceeding to report upon the operations of the past year, I desire to submit a brief review of the conditions affecting the work imposed upon the Signal Corps of the Army at the present time when its duties are most exacting; the theater of its operations widely extended; and when the march of military science is so rapidly progressing that a technical corps, such as the Signal Corps, charged with the collection and transmission of military information, must use its utmost endeavor to keep up with the progress of ideas. To advance and to properly perform the duties imposed upon it, this corps should be provided with a personnel of trained men sufficient in number and skill to carry on its work in widely scattered regions, both at home and abroad—in the Philippines, in Hawaii, at all times in the field, now in Alaska,[1] and presently in Panama. In these theaters of operation the corps is called upon to furnish the means of transmission of information for 90,598 men of the Army on a regular footing, and should war arise to make provision for the signal equipment for an army presumably large but indeterminate before the event; it is required to build and maintain field and garrison lines of telegraph, buzzer, and telephone; to establish and operate at all times fixed radio stations; to devise and use radio apparatus for the field; to supervise the manufacture of and to lay and operate cables; to manage cable ships; to maintain and use field companies for tactical purposes; to organize telegraph platoons for practical use; to build up a respectable aeronautical organization for the Army; and to perform many other duties.

These duties are multifarious and are far too onerous and difficult to be performed in their full requirement by the 1,212 men and 46 officers now allowed the Signal Corps for its work.

Nevertheless the work has been performed, it is hoped, satisfactorily, but at a cost of heavy effort and increased expense in time and money and of lack of completeness; for it is certain that the great field of usefulness lying before the Signal Corps can not be worked to its full extent with the present force for lack of men and for lack of means. Although the corps can, and does, hold what it has gained of usefulness to the Army, it is not encouraged to feel that it is empowered to push on along the road of progress which the steady advance in electricity, in the mechanical arts, and in the navigation of the air marks out, but is compelled to creep slowly forward—if not to remain stationary.

It is obvious to those interested in the transmission of military information that the personnel of the Signal Corps is too small for the proper performance of the important and growing work before it. The field of endeavor is steadily increasing; and almost daily the changes in the mechanical uses of electricity bring out something new in its application to the transmission of information as applied to the purposes of war.

It is probably true, as has been said, that the art of war has not changed with the years; and though the science of war has changed mightily, the difference between the military science of to-day and that of 50 years ago is largely a difference caused by the instan-

[1] NOTE.—It is hoped that the Post Office Department of the Government will take over the cable and telegraph lines and the radio stations in Alaska.

taneous knowledge of events as they occur to-day and the slow groping in the dark of the contending forces of former years, a difference due to the immediate and constant transmission of military information—the duty of the Signal Corps of the Army.

An increase in the personnel, especially of the enlisted force of the corps, is therefore recommended. The character of this increase and other recommendations for betterment of the corps are submitted at the conclusion of this report, and are respectfully but earnestly urged for adoption.

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I. Operations of the Signal Corps in Alaska, the Philippine Islands, and the United States.

ALASKA.

The construction of the Washington-Alaska military cable and telegraph system was begun in 1900 by the Signal Corps of the Army as a military measure, in order first to connect the scattered posts already established in Alaska, and later, by means of a cable from Seattle, to obviate the necessity of sending orders and instructions over a telegraph line through foreign territory; that is, by the Canadian line via Ashcroft and Dawson.

The construction and maintenance of this system in the years that have since elapsed show a record of bravery, pluck, and endurance on the part of the Army deserving of the greatest credit. The difficulties overcome were tremendous, and the hardships and risks encountered by officers and soldiers are worthy not only of high commendation but of a place in the annals of the country. Undoubtedly the work has been of great value to the people of the Territory and has helped materially to develop its resources; but the time has now arrived when these lines have little worth for military purposes, and as a consequence the War Department has requested the Post Office Department to take over the system. It is hoped that this transfer may, with the consent of Congress, be effected during the coming winter and some 200 enlisted men and 5 officers be returned to the Signal Corps for duty more properly military, and the expenditure charged against the military establishment be considerably lessened.

The Washington-Alaska military cable and telegraph system now embraces 2,635.95 miles of submarine cable, 1,047.5 miles of land lines, and 10 radio stations.

The cable system handled in a satisfactory manner the large volume of business sent over it, as did the land lines and radio stations. The interruptions on the submarine cables were confined to the Seattle-Sitka, Sitka-Valdez, and Fanshaw-Wrangell cables. These interruptions were all quickly repaired, with one exception, when the fact that the cable ship *Burnside* was in dry dock being fitted with new boilers necessitated the employment of other means of repair that were not as expeditious. All business was handled promptly, being routed during interruptions of the submarine cable via the naval radio stations and the Dominion lines via Egbert.

The interruptions to land lines were very few and entailed no inconvenience on the public. They were generally caused by the break-

up on the Yukon, forest fires, and snowslides. There was no day on which through communication over the land lines was not possible some time during the day.

The radio stations were in practically uninterrupted operation and were of material assistance in maintaining communication when breaks in the land lines occurred.

The total "this-line" receipts during the year were $183,769.07. "Other-line" receipts amounting to $33,730.77 were collected and turned over to commercial companies. Official messages to the value of $180,677.23 were handled. This is an increase over 1912 in the total money value of business handled for the year of $7,012.85. Telegraphic money transfers to the value of $46,158.66 were effected, the tolls therefrom, exclusive of message tolls, amounting to $542. There were no losses to the Signal Corps in the handling of this large amount of money, and this fact reflects credit on the enlisted personnel of the Army.

The only changes in the number of telegraph offices operated were the opening of the station at Hadley on April 13, 1913, and the closing of the Rapids station on June 21, 1913. The consolidation of the third and fourth sections, to be hereafter designated as the third section, has been authorized and will be effected early in the fiscal year 1914. This will make it unnecessary to station an officer at St. Michael in charge of what was heretofore the fourth section.

The temporary office opened at Thompsons Pass, on the first section of this system, by authority of the Secretary of War, was closed on April 15, 1913; it had been of great value to the traveling public as well as to the men and animals of the Signal Corps during the winter. In view of the fact that this station is required only for short periods and is used principally as a test station in connection with the repair and maintenance of the line, authority has been secured from the Secretary of War to open and close the station when desirable without securing authority in each case.

The duties of the several officers in charge have been satisfactorily performed. It has been suggested that it would be well to transfer to them the duty of supplying the men in their respective sections instead of having this attended to by the Quartermaster Corps. Inasmuch as the officers in charge are in much closer touch with the needs of the telegraph stations, it is thought that this change will be beneficial, and an investigation is now being undertaken to ascertain whether from the viewpoint of the Signal Corps the change is advisable.

On April 17, 1913, the Judge Advocate General decided that items of transportation in connection with the improvements on the Alaskan system were a proper charge against "Extensions and betterments of the Washington-Alaska military cable and telegraph system." As such expenses have heretofore been borne by the Quartermaster Corps, it is feared that this will result in a curtailment of the improvements which would have been made on the Alaskan system each year. The exact amount involved has not as yet been ascertained.

On March 10, 1913, the Secretary of War, through the governor of the Territory of Alaska, authorized the members of the First Alaskan

Legislature to send messages on official business without charge over military cable and telegraph lines in Alaska. This resulted in a decided increase in the amount of official business handled.

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EXTENSIONS AND BETTERMENTS.

The most important work undertaken by the Signal Corps during the fiscal year 1913 looking to the betterment of the land lines in Alaska was the construction of a cut-off from Fort Gibbon to Hot Springs. This work was begun on September 29, 1912, and was completed, after having been suspended at intervals on account of the unfavorable weather conditions, on June 14, 1913. The new line follows American Creek and reduces the distance from Valdez to St. Michael by 76 miles. The line from Fort Gibbon to Rampart was abandoned and the Rapids station closed, as stated above. All business for Rampart is now relayed at Hot Springs. Extensive improvements were made in the line on all sections, consisting of straightening, strengthening, or replacing poles, building bridges, putting in new spans, cutting out detours, as well as removing the danger of forest fires by cutting down near-by trees, and such improvements in the living condition of the enlisted men as it is possible to effect.

CABLE SYSTEM.

The 150 miles of "deep-sea" type and 30 miles of the "intermediate" type cable referred to in the Chief Signal Officer's report for the fiscal year 1912 have been delivered, and the question of laying it is being taken up. The Secretary of War has authorized the abandonment of the cable tank at Tacoma, and action to that end will be taken as soon as the new tank authorized to be constructed at Seattle is completed. The advantages of this change of location are evident.

RADIO.

The Signal Corps radio stations in Alaska, constructed principally with a view to supplementing the land-line service, have fully justified this course, and have given efficient service whenever called on. The plan has been adopted of routing a certain amount of business each day by way of the radio, thus insuring that stations are kept in working condition and ready at any time to take up the work of handling the business of the entire system between the points at which they are located.

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UNITED STATES.

The operation of the Signal Corps in the United States during the year was similar to those of previous years, and covered the management of military telegraph lines, the establishment of post telephone and buzzer annunciator target-range systems, the supplying of signal equipment to the Army and Organized Militia, the installation of fire-control systems for coast defenses, including the preliminary work connected with the equipment of the signal stations which are

expected to be ready at all times to communicate with vessels of the Navy by means of Ardois and other methods of signaling. The Signal Corps has also carried forward the work of enlisting and training of recruits in visual, electrical, and telephone matters, electrical and other experimental work, and active and suitable training in preparing the corps for war and other emergencies. Radio sets have also been installed on the quartermaster transports.

SIGNAL CORPS POSTS AND DEPOTS.

The posts of Fort Omaha, Nebr., and Fort Wood, N. Y., were garrisoned exclusively by the Signal Corps, as was the case during the preceding year. The garrison at Fort Omaha consists of Companies A, B, and H, while the post of Fort Wood is garrisoned by Company G, Signal Corps. The course of instruction for enlisted men embraces the following subjects: Electricity, telephony, telegraphy, radiotelegraphy, line-construction work, and special instruction in telegraphic accounts and property accountability to prepare men for assignment to duty in Alaska. It is contemplated to abandon Fort Omaha as a Signal Corps post. (As a matter of fact, this post was so abandoned and the garrison removed to Fort Leavenworth before this report was sent to print, the balloon house, gas-generating plant, and radio station remaining at Fort Omaha under the charge of the Signal Corps, however.)

The completion of the new radio installations at Fort Wood, including a quenched spark transmitting set, will enable the course of instruction in radiotelegraphy at that school to comprise the latest developments in the art.

GENERAL DEPOTS OF SUPPLY.

The three general supply depots of the Signal Corps were still located during the year at Fort Wood, N. Y., Fort Omaha, Nebr., and Fort Mason, Cal. The efficient organization at these depots has enabled them to meet all demands promptly and satisfactorily. Fort Omaha now carries only material for the mobile army, all fire-control material having been transferred to the other two depots. The total weight of material received at and shipped from the depots during the year aggregated 3,151,734 pounds.

It is anticipated that the depot at Fort Omaha will shortly be moved to one of the quartermaster storehouses in the city of Omaha. This will facilitate the handling of freight and greatly reduce the expense of hauling. (This was later accomplished.)

The old storeroom of the Mason Depot was relinquished, and all Signal Corps stores, including cable, were transferred to a new location on the transport dock at Fort Mason. The material moved aggregated 1,087,159 pounds, comprising 9,395 packages, boxes, and crates.

The reserve equipments for field and telegraph companies at the depots have been held intact throughout the year. These equipments are completed, with the exception of certain articles which deteriorate if held in storage, but these are available for immediate issue.

The card record of available stock at depots, maintained in the office of the Chief Signal Officer in order that it may be known at

all times exactly what is available in the depots, has continued in use as the property record of the depots. This scheme is working with complete success and to the entire satisfaction of all concerned.

ARMY SIGNAL SCHOOL.

The Army Signal School at Fort Leavenworth, Kans., in June closed another very successful year. Nine student officers were graduated, and report shows that the interest was maintained which line officers detailed to this school have always shown in the school and the Signal Corps.

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REMOVAL OF SIGNAL CORPS COMMAND FROM FORT OMAHA TO FORT LEAVENWORTH.

In accordance with the provisions of paragraph 21, Special Orders 163, War Department, July 15, 1913, the Signal Corps garrison has been withdrawn from Fort Omaha, Nebr., and the Signal Corps general supply depot transferred to the city of Omaha. The aeronautical plant and the radiotelegraph station at Fort Omaha will remain under the direction of the Signal Corps.

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CABLE SHIPS.

The Signal Corps has continued to operate the three cable ships—the *Burnside*, the *Joseph Henry*, and the *Cyrus W. Field*—all of which were kept actively engaged during the year in the maintenance of the Alaskan and fire-control cables, with the exception of the period from April 15 to June 30, during which the *Burnside* was in dry dock undergoing extensive repairs, which included the installation of oil-burning boilers.

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FIELD AND TELEGRAPH COMPANIES.

General Orders, No. 24, War Department, February 17, 1911, provide for the organization of field companies, and Field Service Regulations of 1913 have recognized the use and importance of these companies. The field companies are organizations for tactical purposes, using the buzzer, telephone, and radio.

It is believed that the Signal Corps field company of the Army represents the best development of the service of information now existing. They are composed each of 4 officers, mounted, and 96 men, 81 of whom are mounted, and given transportation consisting of 4 carts of special construction, each carrying 5 miles of field wire for use with the buzzer; 2 instrument wagons and 1 kit wagon, 2 field wagons, each carrying 10 miles of wire as a reserve, 85 saddle horses, 8 draft horses and 20 draft mules. The field radio is carried by 8 pack mules. The field companies are designed primarily for combat purposes and for use in deployments. They have, however, during the past year been necessarily used to provide communication lines of information for troops in the field, especially on the southern

border, and have proved most valuable not only in communicating by wire but by the pack radio. The latest pattern of this apparatus is proving most excellent in service. A radio pack set can be put in operation in two minutes, weighs 370 pounds, and under service conditions has a range of 25 miles.

It seems probable that the number of radio sets allowed a field company should be increased to four, in order that on the march, for instance, in advancing the rear station the radio should not be out of commission; with three sets the leap-frog procedure does not stop communications. The fourth set should remain in reserve or at the nearest base station. Should an increased number of radio sets for the organization be decided upon, however, it appears that the field company will be so increased in size that it may become necessary to divide it into two companies—one wire company, the second a radio company, each of four sections, thus forming a battalion.

To the present field company is frequently added a wagon radio set of 2 kilowatts power, with a range of more than 200 miles overland. This set is made up of a pintle-type wagon, drawn by four animals, the rear cart containing the power plant and the front the operating apparatus. Their number will be increased. It is believed that a wagon radio set should be attached to the baggage trains of headquarters, especially of an expeditionary force.

Two of the field companies are now in Texas, one with the second division at Texas City, a second scattered along the border from Fort Bliss. The third field company is at the school at Fort Leavenworth; the fourth in Hawaii; the fifth in the Philippines. The number of these companies should be at least doubled. At present there are none available for service on the Pacific coast, nor east of the Allegheny Mountains. They are not only convenient and useful organizations at all times, but are vital to the Army in actual service. The field companies, however, as is obvious from their equipment, are for tactical use and should not be employed to join a command with its base; to tie the various units together in camp or cantonment, or to connect an expeditionary force with the coast, or the permanent telegraph systems of the country. These duties should be performed by an organization known as the telegraph company.

THE TELEGRAPH COMPANY.

To these companies fall the duties of establishing semipermanent telegraph lines, telephone lines, and installations in camp and cantonment, and constructing and maintaining telephone systems for divisions. This company, established by G. O. No. 55, W. D., September 15, 1913, as a unit of the Signal Corps, supplements the field company and takes its place in camp, cantonment, or from the advance to the rear by maintaining communication with the base, railway stations, and the permanent lines of telegraph or cable of the country traversed. It constructs general lance, or flying, lines for use of telegraph or telephone.

The normal telegraph company consists of six sections, three equipped for camp telephone work and three for field telegraph work. A company as now organized consists of 4 officers and 139 enlisted men. It is provided with 6 lance trucks, 3 telegraph wagons, 6 tele-

phone wagons, 2 repair wagons, 3 field wagons, 43 saddle horses, and 80 draft mules. The telegraph company is equipped with sufficient wire to run about 125 miles of line and to establish 60 telephone and 10 telegraph stations. These, of course, can be increased with added transportation. It is a most useful and businesslike organization and should be the first sent out in the establishment of the permanent encampments so commonly used as training camps.

The telegraph company is, of course, so large a unit that it will, as a rule, be subdivided into platoons or sections. The unit is the section, or one telegraph and one telephone section forming a platoon. The organization of the telegraph company in full has been greatly hampered by lack of horses and mules. The technical material is on hand, but, obviously, without animals the company can not be put in the field. This organization is badly needed at the present time.

Boards of signal officers have carefully prepared special supply tables and these supplies are on hand, so that everything is ready to proceed with the organization and equipment of one or more of these companies.

There already exist detachments, one in the camp at Texas City, Tex., and one in Hawaii, which are in fact dismounted platoons of these telegraph companies, and it is contemplated to organize at least one such company, with headquarters at Fort Leavenworth or elsewhere, completely equipped for proper drill and use where required, when the necessary animals can be obtained.

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II. Signal Office, War Department.

DISBURSING DIVISION.

The following statement shows the volume of work handled during the fiscal year:

Orders placed	1,718
Vouchers audited and paid	2,909
Transportation requests prepared	516
Advertisements for proposals issued (about 7,500 copies being distributed)	1,253
Accounts current from officers handling Signal Corps funds, covering 10 appropriations examined	270

Letters, memoranda, post-card notices, and a large number of other miscellaneous papers pertaining to the above items are not included in the statement, it being impracticable to keep an accurate record of the number.

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III. Signal Troops of the Organized Militia.

Complete field company equipments have been issued to the States of Connecticut and Michigan and the District of Columbia during the year.

A field equipment of semaphore flag kits and wrist watches is now ordered, and will shortly be available for issue to the Field Artillery organizations of the Organized Militia. The cost of these articles has

been reimbursed to the Signal Corps from the allotment received from the Chief of Ordnance to cover the gratuitous issue of Field Artillery equipment to the militia.

Field Service Regulations of 1913 prescribe for each division one battalion of Signal Corps troops composed of two field companies. There are at present in the United States 12 militia divisions. In order, then, that the Militia Signal Corps organizations be in the correct proportion, there should be 24 companies, or 2 to each division. These companies should also be the same as field companies of the Regular Army.

Circular No. 1, issued by the Division of Militia Affairs, dated January 21, 1913, prescribes four types of field companies for the Organized Militia:

Type A, containing 4 wire sections and 2 radio sections.
Type B, containing 4 wire sections.
Type C, containing 2 wire sections.
Type D, containing 2 wire sections and 2 radio sections.

Type A is the same as a Regular Army field company. There are at present in the United States:

Type A companies	11
Type B companies	3
Type C companies	3
Type D companies	5
Total companies, Signal Corps, Organized Militia	22

It will be seen that just one-half of the companies are of the Regular Army type and that 2 companies are lacking to make the number necessary to conform to the required proportion for the 12 divisions.

This Regular Army type company is maintained at war strength, which gives the Signal Corps an advantage over the other branches of the service when called into active service, as the several organizations will not have to suffer from the influx of recruits.

As will be seen from the table, by combining a type C and a type D company a type A company results. In some cases, when called into active service, it will be advisable to combine certain of these organizations, thus forming at once a war strength company requiring no recruits and one that is at least partially trained.

Many of the existing signal organizations are composed of a very good personnel, men who in their civil pursuits follow lines involving telegraphy, electricity, machinery, etc., so that they are well suited to perform their similar duties in Signal Corps work.

Many of these companies are well supplied with Signal Corps equipment and all will shortly be fully so supplied. The 1913 model radio pack sets are now being issued to the type A and type D companies. All new equipment is paid for from unallotted funds, and is not a charge against the several States' allotments.

Some few of the armories of these organizations are not suitable for proper indoor instruction, and many of them have no provision for mounted instruction, so important for field companies. However, improvement is being made along these lines. Most of the organizations take proper care of the technical equipment furnished them, and all take a keen interest in its use.

A correspondence course of instructions has been adopted by the Chief of the Division of Militia Affairs for the instruction of officers belonging to signal organizations of the Organized Militia. It is thought that this course will aid the efficiency of the organizations. It is considered an important advance in militia instruction and will receive all practicable assistance from the Signal Corps of the Army.[1]

IV. Radiotelegraphy.

Radio stations installed by the Signal Corps.

Name of station.	Call letter.	Power (kilowatts).	Whether open to public service.
UNITED STATES.			
Fort Andrews, Mass.	WUA	1	Not open to public service.
Fort Hancock, N. J.	WUB	1	Do.
Fort H. G. Wright, N. Y.	WUC	1	Do.
Fort Leavenworth, Kans.	WUD	3	Do.
Fort Levett, Me.	WUE	1	Do.
Fort Monroe, Va.	WUF	1	Do.
Fort Monroe, Va. (Coast Artillery School)	WUG	2	Do.
Fort Omaha, Nebr.	WUH	3	Do.
Fort Riley, Kans.	WUI	3	Do.
Fort Sam Houston, Tex.	WUJ	10	Do.
Fort Stevens, Oreg.	WUK	1	Do.
Fort Totten, N. Y.	WUL	1	Do.
Fort Wood, N. Y.	WUM	1	Do.
Fort Worden, Wash.	WUN	1	Do.
San Francisco, Cal. (Fort Winfield Scott)	WUO	2	Do.
Signal Corps laboratory, Washington, D. C.	WUP	1	Experimental.
Bureau of Standards, Washington, D. C.	WUQ	2	Do.
Fort Leavenworth, Kans. (Army Signal School)	WUV	1	Do.
ALASKA.			
Circle City	WVA	3	Open to public service.
Fairbanks	WVB	5	Do.
Fort Egbert	WVC	5	Do.
Fort Gibbon	WVD	10	Do.
Fort St. Michael	WVE	3	Do.
Kotlik	WVF	1	Do.
Nome	WVG	10	Do.
Nulato	WVH	10	Do.
Petersburg	WVI	1	Do.
Wrangell	WVJ	1	Do.
PHILIPPINE ISLANDS.			
Fort Frank (Carabao Island)	WVL	½	Not open to public service.
Fort Hughes (Caballo Island)	WVM	⅛	Do.
Fort Mills (Corregidor Island)	WVN	10	Do.
Fort Drum (El Fraile Island)	WVP	½	Do.
Fort William McKinley, Rizal	WVQ	¾	Do.
Fort Wint (Grande Island)	WVR	1	Do.
Manila	WVU	1	Do.
HAWAII.			
Fort De Russy (Honolulu)	WZG	2	Not open to public service.
UNITED STATES ARMY TRANSPORT SERVICE.			
Buford	WXA	2	Open to public service.
Crook	WXB	2	Do.
Dix	WXC	2	Do.
Kilpatrick	WXD	2	Do.
Liscum	WXE	2	Do.
Logan	WXF	3	Do.
Meade	WXG	2	Do.
McClellan	WXH	2	Do.
Merritt	WXI	2	Do.
Sheridan	WXJ	3	Do.
Sherman	WXK	3	Do.
Sumner	WXL	3	Do.
Thomas	WXM	3	Do.
Warren	WXN	2	Do.

[1] The information on which the above report is based was furnished this office by the Division of Militia Affairs.

Radio stations installed by the Signal Corps—Continued.

Name of station.	Call letter.	Power (kilowatts).	Whether open to public service.
SIGNAL CORPS CABLE SHIPS.			
Burnside	WXR	3	Not open to public service.
Cyrus W. Field	WXS	1	Do.
Joseph Henry	WXT	2	Do.
ARTILLERY HARBOR TUGS.			
General Robert Anderson	WYH	½	Not open to public service.
Captain Charles W. Rowell	WYI	⅛	Do.
General A. M. Randol	WYJ	⅛	Do.
General Harvey Brown	WYK	½	Do.
General R. B. Ayres	WYL	⅛	Do.
James Fornance	WYM	¼	Do.
Reno	WYN	½	Do.
Major Evan Thomas	WYO	⅛	Do.
Captain Gregory Barrett	WYP	⅛	Do.

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GENERAL.

The high-frequency, quench-spark type radio pack set designed by the Signal Corps during the previous year was greatly improved during this year, the chief improvement being the adoption of the inclosed gear for the hand-driven generator and a modification of the primary circuit, whereby the sending key is inserted in the field circuit of the alternating-circuit generator. By the adoption of the above an intermittent output of practically double that obtained from the old type can be obtained, thereby practically doubling the output and materially increasing the range of the set. A speed indicator has also been added to the generator, by means of which the men operating same can observe when the generator is being driven at the proper speed, thus obviating the necessity of over and under speed clutch used in connection with the hand generators previously furnished. A number of the new type of these radio sets are now under construction and will be available for issue during the first part of the coming fiscal year. A small, compact gasoline engine has been issued in several instances in connection with the generators furnished for these pack sets, and experiments are now being made to ascertain the advisability of adopting this type of equipment in conjunction with the hand generators for fieldwork.

As far as possible only radiotelegraph equipment manufactured in this country has been purchased, although it has been necessary to supply some spare parts of foreign manufacture for apparatus previously purchased.

RADIO SETS FOR AEROPLANES.

One of the most interesting developments in radiotelegraphy apparatus has been the devising and construction of a radiotelegraph set for aeroplane use, which has been done at the Signal Corps laboratory. The principal features of this set are its extreme lightness, compactness, and efficiency, and the provision of a novel generating set in connection therewith. Successful experiments have been made with improvised apparatus up to a distance of 13 miles, but with the

new apparatus, having several times the usual power, it is thought that ranges of at least 30 miles may be obtained from the aeroplane. So far no successful method of receiving messages in the aeroplane itself has been devised. Fortunately, however, but little use for reception of signals is needed, the prime requisite being to send messages *from* the aeroplane.

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V. Military Aeronautics.

From June, 1912, until November the Signal Corps continued its practice and experimental work at College Park, Md., where an aviation school had been previously established, and where were concentrated all the aeroplanes and aviation material in the possession of the Army, with the exception of two hangars and one aeroplane at San Antonio, Tex., and one hangar at Fort Leavenworth, Kans. On November 1 there were 8 hangars at College Park, 12 aeroplanes, a detachment of 12 officers on aviation duty, and 39 enlisted men. The machines included both the Curtiss and Wright types. The instruction given on these types included both the preliminary work necessary for beginners to obtain the F. A. I. (preliminary license) and also the necessary training of the higher order to obtain the rating of "Military Aviator."

During the period from July 1 to October 1 the main work done was that of instruction. In addition to this, however, time was found to experiment with an automatic gun, photography, and radio, and to take part in the maneuvers near Bridgeport, Conn. The experiments in photography, with the gun, and in radio were successful, the radio outfit developed later being used at Fort Riley, Kans., in connection with the observation of Field Artillery fire from aeroplanes.

OBSERVATION AND CONTROL OF FIELD ARTILLERY FIRE.

Aeroplanes were used for the first time in the United States in connection with the observation of Field Artillery fire from November 5 to November 13, 1912. The aeroplanes were used to locate targets, give the range and direction from the battery, and locate the hits with reference to the targets, giving the necessary corrections.

There were three methods used to transmit information from the aeroplane to the firing battery. The first and most successful was radiotelegraphy. By this means it was not found necessary for the aeroplanes to remain in special position with reference to the battery, as the aeroplanes can observe the effects of fire from front, rear, or either flank, and communicate with the battery without difficulty. Second, dropping cards. It is found necessary in this method for the aeroplane to remain over the battery when the cards are dropped. If the cards are dropped when the aeroplanes are some distance from the battery there is considerable delay in obtaining the information. Third, the smoke-signal method. This was not found as successful as the other two on account of the churning of the air by the propellers of the machine and the lampblack accordingly dissipated. However, this method may be used for short distances very satisfactorily.

The tests proved conclusively that the use of observers in aeroplanes in connection with Artillery fire at hidden targets is entirely

practicable and furnishes means of reaching targets which could not be found otherwise.

When the aeroplane ascended to an altitude of about 2,000 feet it was possible to see the reverse side of slopes of hills and locate targets thereon that could be found in no other way, and when the battery opened fire the position of hits could be located much more accurately and the range corrected by this kind of observation with more certainty than by any other means of fire control tried so far.

GUN FIRE EXPERIMENTS.

In the firing experiments conducted at College Park the Lewis gun was found to be well adapted for service on aeroplanes, as it is sufficiently light in weight for a man to fire from his shoulder. The gun was fired both from the ground and from an aeroplane. In the latter case it was mounted temporarily on a practice machine of the Wright type, and was fired from an altitude varying from 200 to 600 feet. There were 14 hits made out of 50 shots fired. The speed of the aeroplane was 45 miles an hour. The target used was a strip of white cloth 60 feet in length by 5 feet wide. The results of this firing were gratifying, as it was found that the aim could be obtained both by driving the machine directly over the target and holding the gun in place, or by pivoting the gun itself and using both methods together.

MACHINES.

Delivery was made by the Wright and Curtiss companies of scout aeroplanes of the latest type up to that time, and the first tests of machines under these new specifications were held during months mentioned. The machines were far superior to any formerly owned by the Government. Two machines of the Wright type accepted under these specifications were those used with the Field Artillery at Fort Riley, Kans., during October and November.

MANEUVERS.

Two machines, one of the Wright type and one of the Curtiss type, were sent with four officers to take part in the maneuvers held in the vicinity of Bridgeport, Conn., during the month of August. As these machines were of the old type, it was impossible to carry observers, except under the most favorable conditions. As the conditions during the maneuvers were far from ideal, it was necessary for the operator to make his own observations in addition to piloting the machine. Under these disadvantages, however, the results were good; the information obtained was accurate and covered the whole field of operations. Complete reports by all officers concerned in the work of the aeroplanes in the maneuvers were submitted to the Chief Signal Officer, and are on file in this office.

MACKAY TROPHY.

From the College Park station was made the flight for the Mackay trophy. This trophy was presented by Mr. Clarence H. Mackay to the War Department for annual competition by military aviators. The trophy was offered at the annual banquet of the Aero Club of

America, January, 1912, and was accepted for the War Department by Gen. James Allen, then Chief Signal Officer, United States Army. A set of rules for determining the winner was drawn up and approved by the War Department and the board of governors of the Aero Club of America. These tests necessitated that the aviator demonstrate his ability to handle his aeroplane and make a reconnoissance flight as follows:

(*a*) Cross-country flight, 20 miles.
(*b*) Altitude not less than 1,500 feet during flight.
(*c*) Reconnoissances of triangle 10 miles on side, to locate troops, report their whereabouts, and composition.
(*d*) Make accurate landing upon return.
(*e*) Make detailed report of location of troops, composition, and strength.

A board to determine the winner was appointed, and each test was given a value. The maximum number of points that could be attained was 300. The tests were held at College Park the 9th of October, 1912, with but two competitors entered. Both aviators left the field about 9.30 a. m. One was forced to return on account of sickness, without having made the necessary reconnoissance; the other returned in about three-quarters of an hour, having located the troops, and was declared the winner of the trophy. The trophy was formally presented by the president of the Aero Club of America to the Assistant Secretary of War.

In November, for reasons of climate, the training school at College Park was discontinued for the winter, and during the winter months the aviation school was conducted at Augusta, Ga. There were five officers present for duty and seven aeroplanes for instruction purposes, including a Burgess-Wright tractor.

At San Diego, Cal., there had been established a temporary school of instruction for the use of which the Government paid nominal rental, and instruction was carried on with hydroaeroplanes and flying boats.

In February, 1913, the second division of the mobile army was concentrated at Texas City, Tex., and it became obvious to the then Acting Chief Signal Officer that the aviation school should be immediately transferred from Augusta to Texas City in order to take part in field operations and because it is believed to be a cardinal principle, heretofore not fully realized, that aviation should be carried on in the presence of troops in order that the Army, and especially commanding officers, may learn something of the use of the aeroplane under actual field conditions and that the aviators themselves do their work in connection with the men of the line of the Army, for whose advantage they are being trained.

Accordingly the entire school at Augusta and the small aviation detachment temporarily at Palm Beach, Fla., were removed to Texas City, placed in camp near the headquarters of the second division, and when conditions permitted were used to maneuver from the concentration camp.

Weather conditions on the Gulf coast in the spring of the year are very unfavorable to aviation, and particularly so for beginners in this science, but nevertheless some progress was made by the latter, and the more experienced aviators performed some very praiseworthy and remarkable flights, which it is believed helped the cause of aviation with the Army.

The following flights are briefly noted: A cross-country flight from Texas City, Tex., to San Antonio, Tex., during which was established a new American cross-country and endurance record for pilot and observer together, on the 28th of March, and the return trip to Texas City made under similar conditions on March 31. The flight to San Antonio began at 2.15 p. m. and ended at 5.35 p. m., making the time 3 hours and 20 minutes in covering the 240 miles between the start and finish; but on arriving at San Antonio the aeroplane remained in the air for over an hour, thus establishing a new American endurance record for pilot and observer of 4 hours and 22 minutes. The return trip from San Antonio to Texas City was more rough than the outgoing one, but was successfully made. Thus two of the longest nonstop cross-country flights ever made in this country, not only by military aviators but by any aviator in America, were completed. The actual distance covered was some 480 miles, with one stop; the actual length of flight was about 540 miles.

This flight is even more remarkable than it first appears, on account of being made entirely over unfamiliar country that offered but few landing places in case of engine accident. The machine used was the Burgess tractor, equipped with a 70-horsepower Renault motor. On the return to Texas City a gust of wind tore away the right triangular vertical accessory plane, but the flight was uninterrupted.

On this same trip a remarkable military sketch map was made by the reconnoissance officer, which was fairly complete in detail and showed railroads, wagon roads, towns, streams, hills, woods, prairies, and other topographical features that might be of great value in military reconnoissance work. The map was made in sections, unrolled as each was completed, the sections showing the country traveled during intervals of 10 minutes. The scale was in minutes and the entire map was about 18 feet in length. This is the first map ever made from an aeroplane covering such a distance—so far as known.

Earlier in the month a flight was made from the camp at Texas City to Houston, Tex., and return, a total distance of 80 miles, and following this flight another was made from Texas City to Houston and return.

Meantime training was continued at San Diego, Cal., with both hydroaeroplanes and flying boats, and, in spite of two fatal casualties, very considerable progress was made. The officer in charge of the camp at that place made numerous cross-country flights and instructed beginners. Two officers completed all tests for the military aviator's certificates, as did another just before his death on May 8.

An excellent and very unusual map was made by one of the aviators while flying alone, and is remarkable as an evidence of what an aeroplane can do in reconnoissance work even without an additional observer.

Several other brilliant flights were made in the vicinity of San Diego. One of these covered 55 miles in 1 hour and 5 minutes at an altitude of 6,500 feet.

About this time preparations were made to abandon the aviation school at College Park, Md., and on May 6 the Chief Signal Officer recommended that the annulment of the lease, which expired on

June 30, 1913, be authorized and the abandonment of College Park as a station be accomplished.

Experience proving that, for comparatively unskilled men, training at Texas City was too hazardous to be continued, the less experienced fliers and their instructors at Texas City were transferred to San Diego, Cal., about June 14, 1913, at which place weather conditions are known to be as nearly perfect as may be found in this country.

At the present time the status of the personnel engaged in aviation duty is as follows:

With the second division, Texas City, Tex., 1 officer, 26 enlisted men of the Signal Corps, and 2 aeroplanes.

At San Diego the school has under instruction, for the purpose of obtaining the certificate of military aviator, 12 officers. There are at this school about 48 enlisted men and 7 aeroplanes. Under orders from the War Department 1 officer with 2 aeroplanes and 12 enlisted men were sent to Honolulu for duty with the First Hawaiian Brigade.

In the Philippine Islands the officer in charge has on temporary duty for instruction purposes four officers. With this detachment are five enlisted men and two machines.

At the present time there are 11 officers who have been rated as military aviators; four of these have been returned to their arm of the service and one is deceased.

It may be remarked that the present and logical plan in regard to future aviation in the Army is to concentrate the aviators, personnel, and matériel now in the United States at some suitable Government reservation where ample ground is available and where all aviators who have reached a sufficient degree of proficiency may be trained in the presence of troops to carry on the future work of aviation. It will probably be found necessary, at least for the present, to maintain a school of preliminary instruction at some place such as San Diego where the officers beginning the work can receive their preliminary training, after which they will be concentrated at a main aeronautical center.

MATÉRIEL FOR AERIAL NAVIGATION.

In addition to the vast amount of data that has already been compiled on this subject in the office of the Chief Signal Officer of the Army, the following aviation matériel exists in the Army to-day:

Number.	Make.	Type.	Motor.	Horse-power.	Station.	Military type.
2	Curtiss	D	Curtiss	75	San Diego, Cal	Speed scout.
3	Wright	B	Wright	30	do	Training.
5	B-Wright	F	Sturtevant	40	do	Do.
6	Curtiss	D-E	Curtiss	60	do	Do.
8	do	E	do	75	Honolulu, Hawaii	Scout.
9	Burgess tractor.	H	Renault	70	Texas City, Tex	Do.
10	Wright	C	Wright	50	San Diego, Cal	Do.
12	do	C	do	50	Manila, P. I	Do.
14	do	C	do	50	Texas City, Tex	Do.
16	do	C	do	30	San Diego, Cal	Training.
17	B-Wright	I	Sturtevant	60	Manila, P. I	Scout.
19	Wright	D	Wright	50	San Diego, Cal	Speed scout.
20	do	D	do	50	San Antonio, Tex	Do.
21	Curtiss tractor.	.....	Curtiss	80	Honolulu, Hawaii	Scout.
22	do	.....	do	90	San Diego, Cal	Do.

Aeroplanes not in use.

Number.	Make.	Disposition.
1	Wright	Delivered to Smithsonian Institution.
4	do	Destroyed in accident.
7	do	Do.
11	do	Do.
13	do	Do.
15	Curtiss flying boat	Do.
18	Burgess-Wright	Do.

It will thus be seen that there are now actually on hand for service 17 aeroplanes, and 6 more will be delivered by October 15, 1913. The free-balloon and captive-balloon material now at Fort Omaha, which will be of use as part of a dirigible plant, will be necessary for all preliminary training in dirigible-balloon service. It is to be understood that a thorough knowledge of the management of free balloons and of gas plants is necessary to practical aeronauts who are to take charge of and fly dirigibles.

RADIOTELEGRAPHY AS APPLIED TO AVIATION.

In connection with the material now used in aviation, note must be taken of radiotelegraphy. The importance of this art as being the only suitable means of immediately reporting the results of a distant reconnoissance was early recognized by the Signal Corps. Experiments which were begun last summer at College Park, Md., have since been continued, and steady progress has been made. The same general type of apparatus has been used as in the standard Signal Corps radio-pack set, with certain exceptions necessary to secure the desired economy in weight. The first tests were made with the antenna, a wire from which the electromagnetic waves are radiated, installed on the frame of the machine, but this has since been abandoned in favor of a hanging wire on account of the increased range of operation. The distance which these sets will cover depends largely on the height of the mast carrying the receiving antenna, and in the case of the sectional mast of the Signal Corps field companies this should be about 25 miles. In the event of hostile armies approaching contact, this distance corresponds in time to between one and two days.

The aeronautical radio set developed by the Signal Corps represents the latest achievements in the art. The quenched spark, the 500-cycle generator, and other recent developments have been combined to produce in one machine the maximum of efficiency. It is believed that no foreign army to-day is prepared to duplicate this set.

EQUIPMENT AND PERSONNEL.

The equipment and personnel of the Army Aviation Service September 30, 1913, are:

IN THE PHILIPPINES.

Equipment:

2 medium-powered scout-type machines. (1 Burgess type hydroaeroplane and 1 Wright scout-type aeroplane.)

The above machines can be converted into hydroaeroplanes with equipment already in Philippines.

Personnel:

4 military aviators.

1 officer on temporary duty, capable of flying alone.

IN HAWAII.

Equipment:
1 medium-powered Curtiss tractor.
1 medium-powered Curtiss scout-type aeroplane, with necessary equipment to convert them into hydroaeroplanes.
Personnel, 1 military aviator.

SAN DIEGO, CAL.

Equipment:
3 low-powered Wright type training machines.
1 low-powered Curtiss type training machine.
1 medium-powered Curtiss tractor.
1 Curtiss speed scout.
1 scout type medium-powered Wright aeroplane.
1 speed scout Wright.
Personnel:
4 military aviators.
4 officers capable of flying alone.
8 officers receiving instruction.

SAN ANTONIO, TEX.

Equipment, 1 medium-powered speed scout aeroplane.
Personnel, none.

TEXAS CITY, TEX.

Equipment:
1 medium-powered Wright scout-type aeroplane.
1 high-powered Burgess scout-type aeroplane.
Personnel:
1 military aviator.

The Army has no dirigibles of any kind.

The following machines are ordered and should be accepted by the Government by October 30, 1913:

Three Burgess medium-powered scout-type aeroplanes, Renault engines, 70 horsepower.

One Wright high-powered aeroplane, new requirements, Austro-Daimler engine, 90 horsepower.

One Curtiss high-powered aeroplane, new requirements, Gnome engine, 160 horsepower.

One Burgess-Curtiss high-powered aeroplane, new requirements, Renault engine, 100 horsepower.

PENDING PURCHASES OF AEROPLANE ENGINES.

This office has made arrangements with the consul general at Paris, France, through the State Department, to purchase eight Renault aeroplane engines of 70 horsepower each. Two of these engines were delivered in August, four during September and two during October. The cost of the engines is 12,000 francs ($2,400) each in Paris. This is the same size and type of engine used in the tractor aeroplane that made such a successful trip from Texas City, Tex., to San Antonio, Tex., and return, in April.

Three more of these machines are being constructed by the Burgess Co. and Curtiss, of Marblehead, Mass. It is desired to have an entire squadron equipment of eight machines of this type, with four engines in reserve, as is the universal custom in the aeronautical services abroad. This type of machine can be used by experienced fliers, and is intermediate between the small practice machines and the large high-speed war type, three of which are now being constructed.

SUMMARY OF AEROPLANE SERVICE.

The following is a résumé of the important work done by the United States Army aero squadron in the past two years:

Radio.—During the Connecticut maneuvers, signals which were sent 12 miles were received and heard very distinctly.

At College Park in August, 1912, messages were sent for 10 miles that were heard without any trouble.

At Fort Riley the aeroplane was in constant communication with the ground during artillery practice. The radio was used there most successfully, reporting the position of targets and locating the position of hits.

This radio set weighs about 75 pounds complete, and is presumed to have a range of about 30 miles, but has not yet been tested for distance.

A receiving set for the aeroplane has not been developed up to this time.

Scouting.—Troops were located very easily and accurately by all the aeroplanes at the Connecticut maneuvers last August. The troops were not only located from altitudes of 2,500 feet, but their position was plotted on the map. Any troops the size of a company or larger were very easily located.

Targets, although the same color as the background, were picked up at Fort Riley last fall from a height of 1,500 to 2,500 feet at a distance of 3,600 to 4,500 yards.

Communication.—Besides radio, aeroplanes have communicated with the ground by dropping cards through a card chute and by smoke signals. The latter method was tried out at College Park and Fort Riley with more or less success.

Map making.—This has been tried with more or less success for two or three years at College Park and Augusta. A map of the country between Texas City and Fort Sam Houston showed railroads, roads, woods, towns, rivers, hills, cultivated land, and other military features. It covered 234 miles, and was drawn to a time scale—6 inches equaling 10 minutes of flight. All bearings were taken from a compass mounted on the aeroplane.

Photography.—Photographs have been taken from aeroplanes ever since the school opened at College Park in June, 1911. Some very good pictures have been taken, but up to the present time there has not been a standard aeroplane camera adopted. Photographs taken at 1,500 to 2,000 feet altitude show the topographical features of the ground very distinctly and, of course, very accurately.

Bomb dropping.—This has been tried only to a limited extent. The Scott bomb dropper was tried out, but the aeroplanes owned by the Government at the time of the trials did not have sufficient power to climb to over 300 feet with the added weight. However, dropping the bombs from that altitude proved that the principle of the apparatus was correct. Additional experiments are to be undertaken during the coming winter.

Appropriations for 1913, various countries.

France	$7,400,000
Germany	5,000,000
Russia	5,000,000
England	3,000,000
Japan	[1] 1,000,000
Italy	2,100,000
Mexico	400,000
United States	125,000
Total amount expended by the United States since the inception of the art	255,000

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VI. Coast Observation and Coast Patrol.

The attention of the Secretary of War is invited to an important element of the coast defense which pertains to the Signal Corps of the Army and should, in the opinion of the Chief Signal Officer, receive the consideration it deserves in order that when need arises the necessary plans may be ready and material at hand.

The reference is to an adequate system of coast patrol or observation, a matter that has not received from the Army the attention it deserves. It is true that designs for radio and signal stations have been drawn up by the Signal Corps, and, in several instances, the structures have been erected in the Artillery districts; but great stretches of coast, often containing good harbors and magnificent lookout stations, occupied by the executive branches of the Government, at which valuable information of friend or enemy at sea may be gathered, remain not only unprovided with signal stations but are generally unprepared for use in war, which is a condition that should be changed.

Of course, it is assumed that when needed these outposts will be given necessary equipment; but for this no provision has yet been made by the Signal Corps of the Army. This state of unpreparedness in regard to an important factor of the defense should not be attributed to lack of foresight or to negligence on the part of the Army, but considered due, first, to the fact that coast defense as a whole has not yet been taken up in detail, and, second, to lack of means and multiplicity of duties imposed upon the small Signal Corps of the Army by whom the systems of coast patrol should be planned and lines of information be installed and operated when authorized.

It appears that a patrol of the coast has been well planned by the Navy, who, it is understood, have included in this service officers and men drawn from the various executive departments of the Government, from the Naval Militia, and from the Volunteers, all of whom will be under the control of the Navy Department in war. It seems that the Signal Corps of the Army should, without delay, be authorized to take up this matter and through a properly organized patrol of its own creation carry on this important work. It is believed that without the full cooperation of the Signal Corps and the participation of troops trained in the service of lines of information, and in establishment of signal stations and in the use of flying telegraph and buzzer lines, the telephone and field radio, cables, visual apparatus, and perhaps the aeroplane and balloon, it is hard to see not

[1] Approximate.

merely how the best methods of gathering intelligence in war can be employed by a coast patrol, but how, when so gathered, this intelligence can be transmitted to the centers of control, to Artillery fixed positions, and their auxiliaries, and to the mobile army, from distant observation stations, coast islands and lighthouses, or from the floating auxiliaries and passing ships, with the speed and certainty which alone make such information valuable.

The transmission of intelligence should be intrusted only to trained men under military control, supplied with the best known appliances for this service, and should never be left to the chance efforts of any irresponsible person who can use a key or a radio instrument. In other words, it is recommended, should a patrol be authorized that it be organized under the Signal Corps of the Army, and that the section of the coast patrol to which the *duty of transmission of information is intrusted should be composed of men trained in naval and military signaling and in the methods of the Signal Corps.* In addition, it is presumed that signalmen of the Army and of the Militia will be detailed aboard scout ships, patrol and picket boats, and other floating auxiliaries, for duty as radio and visual signalmen, but this is a detail that need not be considered here.

From what has been said it appears that in case of threatened invasion the coast patrol, if organized, will become one of the strongest arms of that service of security and information upon which so much dependence is necessarily placed in modern war, and in consequence that this patrol when organized will be thoroughly efficient in numbers, personnel, organization, and equipment, and that its men, who are frequently placed at lonely stations and required to act upon their own initiative, will be not only steady, well-disciplined soldiers, but in addition will be intelligent, keen, and watchful men, skilled as observers and trained in the use of the telegraph and of mechanical appliances; and above all, that they will possess that judgment which seldom blunders in its work. Fortunately for the country, men of this character are many in civil life, and will be found in abundance among the volunteers called out in war. As to the organization of a patrol, it should appear that none better can be found than that approved by the experience of the Signal Corps of the Army, whose duties are similar if not identical with those of the coast patrol, though more widely extended. The equipment, too, should be that of the regular service. In short, it is believed that the coast patrol of the Army should be organized, trained, and equipped by the Signal Corps, and that the collection of information, so far as it relates to this service and its transmission in coast defense, should, as with the Army in the field, be placed under the charge of the Chief Signal Officer of the Army, acting through a subordinate officer in immediate control at the front. The men of this organization can not and need not be actually present during peace, except those of the executive departments of the Government, and hence the actual enrollment of the personnel may be left to a later period, but plans of organization should be undertaken without delay and the necessary material provided.

COAST PATROL AND ORGANIZED MILITIA.

The training of a coast patrol will include the installation and use of signal equipment of all kinds; the operation of field and station

radio; the establishment of observation stations; the service and maintenance of lines of field telegraph and buzzer; and, in general, in the collection and transmission of military information by all approved methods. There seems no reason why this instruction should not be given to the signal organizations of the militia, as is now done for the artillery and infantry of the State troops in connection with the yearly exercises or maneuvers of the Coast Artillery of the Army. To do this would simply mean the extension of the present valuable training of the militia to include instruction in the service of a coast patrol within certain prescribed limits and would give to the signalmen of the militia training in a branch of Signal Corps work of great importance to them, especially in those States which border the sea. Furthermore, it is believed that the plans for an organized coast patrol will provide that in war the signalmen of the militia be formed into companies and regiments with the signal troops of the Regular Army and with the necessary number of technical men of the volunteers taken from telegraph operators and telephone men of civil life in such proportion that the whole shall form an effective service.

As a further step in preparation for coast defense it is suggested that the Signal Corps of the Army be authorized to provide at Government reservations, such as lighthouses, marine hospitals, and life-saving stations, and those of other executive departments, suitable as lookout stations, magazines of material of the less perishable sort which will furnish part of the means of establishing observation stations at the outbreak of war. In addition, island stations and lightships should be connected by cable (out of use in peace and with the ends prepared for periodic testing to insure their perfect condition) with the interior or mainland stations, whence the military field telegraph could rapidly be extended at need to commercial offices and certainly be provided with the portable radio sets at the inception of hostilities. A reserve of sets should be provided, and provided in time, since they require months in the making. In this way many permanent and important lookout stations of the civil departments of the Government which are always on duty—Point Judith, as an instance—will, when needed for coast-guard service, be ready for almost immediate use. At mainland stations of the Government should be placed signal stores of a bulky character, telegraph or telephone material, wire, lance poles, supplies for electrical batteries, flags, and other apparatus for the use of the communications, both visual and electrical, in war.

These preparations should not be put off to the day of stress, sure to precede hostilities; for if the stations and material needed are ready, the men necessary to use the radio and equipment and construct lines of field telegraph and buzzer can be quickly placed on duty in an emergency. It is probable that most of the valuable observation points of the coast are now occupied by Government stations of one service or another and could safely be provided with necessary material, with a reserve of delicate apparatus stored for use when needed; but others are so circumstanced that nothing should be done by way of preparation until hostilities threaten, since, if not owned by the Government, magazines can not wisely be established at them. Such points can, however, and should, be carefully marked, their character

made known, and, possibly in the case of very important localities, material for their conversion into signal stations be stored at the earest artillery post.

Enough—perhaps too much—space has been given to the coast patrol, but the subject is new and interesting and sufficiently important to warrant careful attention. With no factor of the defense is the Signal Corps of the Army more intimately connected, and it should be evident that without signalmen a coast patrol will be feeble indeed.

VII. Recommendations.

To increase the efficiency of the Signal Corps of the Army.

In view of what has been previously stated, the following recommendations are made:

First: That a bill be enacted into law to increase the efficiency of the Signal Corps of the Army measurably identical with that, as amended, introduced January 9, 1908, in the first session of the Sixtieth Congress, by Mr. Hepburn, of Iowa. In a report on this bill it was recommended by the Committee on Military Affairs that "it do pass with the following amendments," and regarding it Mr. Hull, of Iowa, then chairman of the committee, submitted on January 26, 1909, a report, concluding with the remark that—

> The committee also submits some extracts from reports from the chief umpire on summer maneuvers of 1908 and believe that no more important legislation for the effective organization of the Army can possibly be enacted than this increase of the Signal Corps.

This bill as amended should be corrected in order to comply with present requirements to provide that the Signal Corps of the Army shall consist of—

> One Chief Signal Officer, with the rank of brigadier general; 3 colonels; 3 lieutenant colonels; 10 majors; 40 captains; 48 first lieutenants; 60 master signal electricians; 240 first-class sergeants; 250 sergeants; 350 corporals; 1,000 first-class privates; 300 privates; 40 cooks; 16 farriers; 16 horseshoers; 16 saddlers; 32 wagoners; and 50 trumpeters; and each grade shall receive the rank, pay, and allowances as now provided by law: *Provided*, That the Chief Signal Officer of the Army shall be appointed as now provided by law, and vacancies thus created shall be filled, first, by the promotion of officers holding permanent appointments in the Signal Corps according to seniority after the examination now required by law, and, second, by details to the Signal Corps from the Army at large from the grade in which the vacancy exists or from the grade below: *Provided*, That officers so detailed in the grades below that of major shall not be again eligible for such detail until they shall have served for at least one year away from that corps: *Provided further*, That the Signal Corps of the Army shall be organized as may be directed by the President of the United States, and the officers and enlisted men assigned to duty with troops shall, when so specially designated by the President, constitute a part of the line of the Army.

This suggested bill as corrected is not intended to make provision for an aeronautical service.

Since the bill for Signal Corps organization, introduced in 1908, there has been a great increase in the demand for field organizations of the Signal Corps, and in field service regulations and existing general orders there has been a recognition of field companies and telegraph companies of the Signal Corps for service with the mobile Army. The military forces of the country are now apportioned among six divisional and territorial commands. As field service

regulations recognize the need of 1 field battalion for each division, 12 Signal Corps companies (6 battalions) should be provided. It would appear that for due training and use in connection with large camps that may be established four telegraph companies would be a proper assignment. In addition certain organizations, which have been named depot companies, are required to be distributed throughout the country to take care of the elaborate post telephone systems now in existence and the important target-range installations. In addition there should be assignments of Signal Corps operators to the military telegraph offices, many of which are now unsatisfactorily filled by civilian employees. There should be a suitable percentage of the Signal Corps men undergoing training at the enlisted men's schools. For all purposes, excepting aviation, it is estimated that a total enlistment of 2,370 men be provided, say 2,400 enlisted men.

After more than twelve years' experience with the detail system in the Signal Corps and a full recognition of the advantages that mutually result to the line of the Army and to the Signal Corps, it is now seen by the light of experience that some modification of this system is required if the best efficiency is to be realized from a technical corps. As matters are now shaping, the Signal Corps will soon become a technical corps without technical officers.

The Corps has received from the line 29 of its present personnel, and but 17 of the permanent corps remain.

Many of the detailed officers have shown rare devotion and ability in the performance of their duties; still, there is no question that a technical corps can not continually stand the drain upon its trained officers to which the Signal Corps is now subjected. A change in the present method of detail is imperative; it is therefore earnestly recommended that as long as the Signal Corps remains a corps whose officers come to it by detail the latter should receive the same incentive as provided by the present system of detail in the Ordnance Department.

AVIATION ORGANIZATION (RECOMMENDED).

The Army of the United States has been recently segregated into six divisional and territorial commands. These are tactical units, and, as it is believed necessary that a considerable aeronautical organization should be assigned as a part of each main tactical unit, boards of officers have reported that an organization called an aeronautical squadron should be assigned with each of these tactical units to serve as a component part thereof for peace training or for service in war.

On account of the present reduced strength of these divisions, it has been recommended, from economical considerations, that at present the organization of only four aeronautical squadrons be authorized and that two of these be subdivided so that distribution may be made of the subdivisions among the tactical units requiring them. The four aero squadrons thus formed should be placed at appropriate aeronautical centers, each under the command of a field officer and serving incidentally as a center of aeronautical instruction.

The organization and equipment of each of the aeronautical squadrons and the reasons leading up to them are as follows:

It is desirable to assign for the operation of an aeroplane two officers, who alternate in long cross-country flights as observer and aviator or pilot. Both should be capable of handling the machine in case of the death or disability of the man at the lever. It has been found also by experience at home and abroad that at least five enlisted men are required in the care, repair, and handling of an aeroplane. This necessary personnel—two officers and five men—constitute the personnel for one aeroplane or a section. Two aeroplanes and their sections are proposed as the platoon; two platoons compose the company; and two companies, commanded by a major, constitute the aero squadron. *The aero squadron is the tactical unit proposed for assignment to a division.*

In the assignment of officers to the companies it is assumed that the eight aviators are acting either as instructors or pupils, and it is highly desirable that they should not be included in any of the administrative or property work of the organization. In other words, the company should be regarded somewhat as a school organization. To each company, whether on a peace or war footing, it is most desirable to assign an officer as executive and property officer who will not be an aviator and not subjected to the unusual risk which such service involves.

PERSONNEL OF AERO COMPANY.

8 officers, aviators (captains or first lieutenants).
1 officer, executive and property officer (captain or lieutenant).
1 master signal electrician (to replace civilian aeronautical engine expert at present employed at high salary).
2 first-class sergeants (1 as first sergeant and 1 as supply sergeant).
5 sergeants (1 in charge of each aeroplane and 1 as mess sergeant and as assistant to first sergeant in clerical work).
9 corporals (1 on duty with each aeroplane and 1 as chauffeur for each company motor vehicle).
2 cooks.
14 first-class privates (3 with each aeroplane and 2 as musician orderlies).
6 privates (for general use and to replace vacancies in aeroplane crews).
Total commissioned, 9; total enlisted, 39.

PERSONNEL OF FIELD AND STAFF OF AERO SQUADRON.

The squadron, being composed of two companies organized as above, should be provided with the following staff:

1 major (commanding squadron).
1 captain (adjutant and supply officer).
2 master signal electricians (necessary for duty with the more important aeronautical centers).
2 first-class sergeants (1 sergeant major and 1 supply sergeant).
6 corporals (chauffeurs of squadron motor vehicles).
2 first-class privates (musician orderlies).

Totals:

	Commissioned.	Enlisted.
Squadron, field and staff	2	12
Two companies	18	78
Total for each squadron	20	90
Total for four squadrons	80	360

It is suggested that in addition to the officers required for the aero squadrons, there should be in the office of the Chief Signal Officer of the Army a colonel of the Signal Corps assigned especially to aeronautical duty, and one lieutenant colonel to be assigned to such aeronautical service as may be required.

For the peace assignment, instead of two officer aviators to each section, one officer per aeroplane is recommended. In case of war it is considered necessary to have two aviators assigned to each aeroplane, but this expansion could be made upon mobilization for service in the field.

REWARD TO AVIATORS (RECOMMENDED).

Legislation is asked to provide a proper recognition of men who engage in the extra hazardous service of aviation. The rewards which have been offered to officers in this important service have so far been inadequate and have not resulted in securing even the limited number for aviation duty now authorized by law. Some generous provision must be made to secure these officers. It is proposed, therefore, to extend to aviation the ordnance detail system to include the four majors that are hoped will be provided; to give an increase of 100 per cent in the pay of their grade to officers in aeronautical service who are detailed on the actual duty of operating aeronautical craft; to increase the pay of each enlisted man 50 per cent; to provide that there shall be paid to the widow or heirs of any officer or enlisted man who dies or who has died as the result of an aeronautical accident in the line of duty, or to any other person previously designated by him, an amount equal to six months' pay at the rate received by him at the time of his death, in addition to the amount provided to be paid by the act approved May 11, 1908; and finally, to provide that any officer detailed on aeronautical duty and who has been or shall be injured in an aeronautical accident in the line of duty and is disabled thereby to the extent of necessitating his retirement from active service in the Army, shall receive the full pay to which he is entitled when so retired.

AVIATION TRANSPORTATION (RECOMMENDED).

In addition to the personnel and the aeroplanes themselves, transportation in the shape of automobiles and motor cycles is necessary in the aviation service. The organization outlined above requires for transportation of personnel, spare parts, gasoline, etc., belonging to the combat train of each company, 5 automobile tractors and 2 motor cycles; for the squadron reserve train, 6 automobile tractors and 2 motor cycles; a total of 16 automobile tractors and 6 motor cycles.

Squadron headquarters:
- 1 aeroplane tractor for personnel (7-passenger chassis).
- 3 aeroplane tractors for repair parts, wings, engines, etc.
- 1 aeroplane tractor for repair shop.
- 1 tank tractor for gasoline and oil.
- 2 motor cycles.

Each aero company:
- 1 aeroplane tractor for personnel (7-passenger chassis).
- 4 aeroplane tractors for towing aeroplanes (7-passenger chassis).
- 2 motor cycles for musician orderlies and for messenger work.

ADDITIONAL PAY FOR TELEGRAPH OPERATORS (RECOMMENDED).

Third. The act of May 11, 1908, provides for additional pay for enlisted men in Coast and Field Artillery for special skill as plotters, gun pointers, casemate electricians, first and second class gunners,

and in other branches of the service for expert riflemen, sharpshooters, and marksmen. The instruments above all others in which the Signal Corps men must be expert are telegraph instruments used either on the field lines, wire lines, over submarine cables, or in radiotelegraphy. Special skill in the use of these instruments corresponds exactly to special skill provided for and rewarded under the act of May 11, 1908, as above stated. The commanding general must have great confidence and dependence in these men, and it seems very just and proper to compare the value to the Government of this professional attainment with the value of those enumerated above for which additional pay is already provided.

At present the only way of increasing the pay of expert operators is by appointing them to the grade of noncommissioned officers, or of increasing their rank in that status. From this it may readily result that men—excellent as telegraphers, but wanting in other qualities necessary in noncommissioned officers; for instance, ability to control men—may be given warrants of appointment to secure for them the extra pay which is their due.

Such additional pay would be a great stimulus to the attainment of skill by operators, and thus improve the service.

* * * * * * *

RATING OF RADIO OPERATORS (RECOMMENDED).

Fourth. The position of radio operator on board ship is a most important one. Upon his unremitting attention and skillful performance of duty much may depend. It follows that these men should possess ability and character and should be so treated that they are at all times ready to render a willing, zealous, and cheerful performance of duty. It is understood that on merchant ships the radio operators are counted among the ship's officers and messed and quartered as such. They wear a distinctive insignia. In the United States Navy the radio operators are rated in accordance with the high importance of their duties. It is believed that more consideration should be given to these men on transports than is at present the case, no matter what may be their military rank.

In addition, it may be said that under recent orders and agreement it is presumed that Army transports will become commercial radio stations, in which case operators will play the same part as those on commercial and naval ships and receive money for tolls. Under existing instructions three operators are assigned to each transport. The Signal Corps selects for the position of radio operator the best men available, but is frequently compelled to assign to this duty men of low noncommissioned grade, or even privates; but, in spite of their military rank, it seems that these men while aboard ship should be classed with the ship's officers. It is therefore earnestly recommended that enlisted men of the Signal Corps of any grade assigned to duty as radio operator aboard transports shall be rated as "military telegraphers," first, second, or third class, as the case may be; given the consideration accorded to noncommissioned officers of the highest grade; and be subsisted in the ship's officers' mess.

TRANSFER OF WASHINGTON-ALASKA MILITARY CABLE AND TELEGRAPH SYSTEM (RECOMMENDED).

Fifth. Regarding the transfer of the Alaska military telegraph and cable lines to the Post Office Department of the Government, which, it is hoped, will be effected during the coming regular session of the Sixty-third Congress, it is urged that this transfer go into effect as soon as possible upon the passage of the necessary legislation; that the Signal Corps and the Army be relieved immediately thereafter from all responsibility for operation and maintenance of lines and stations, and, further, that the system be transferred as a whole to the Post Office Department, leaving no part of the cables, land lines, or radio stations or equipment in charge of the Signal Corps of the Army.

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All of which is very respectfully submitted.

GEORGE P. SCRIVEN,
Brigadier General,
Chief Signal Officer of the Army.

The SECRETARY OF WAR.

REPORT OF THE CHIEF OF COAST ARTILLERY.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF,
COAST ARTILLERY DIVISION,
Washington, October 31, 1913.

From: Chief of Coast Artillery.
To: Chief of Staff.
Subject: Annual report.

I submit herewith an annual report on the personnel and matériel of the Coast Artillery.

STRENGTH OF THE COAST ARTILLERY CORPS.

On June 30, 1913, the actual strength of the Coast Artillery Corps was 748 officers (excluding 14 chaplains) and 16,628 enlisted men. The strength authorized by law is 751 officers (excluding 14 chaplains) and 18,471 enlisted men.

The strength of the Coast Artillery Corps was therefore, on June 30, 1913, below the strength authorized by law 3 officers and 1,843 enlisted men.

The following table shows the personnel required to provide one complete manning body for all of the elements of all coast defenses now constructed and appropriated for under the adopted policy that the Coast Artillery of the Regular Army shall man fully all of the guns, mortars, mines, and accessory matériel in the insular possessions and the Canal Zone and all of the mines and one-half of the guns, mortars, and their accessory equipment in the United States

proper, and that the Militia Coast Artillery shall man one-half of the guns and mortars of the defenses of the United States proper:

Defenses constructed and appropriated for.	Officers.	Men.
Regular Coast Artillery required for all mines, power and light plants of home defenses	169	4,970
Regular Coast Artillery required for all mines, power and light plants of insular and canal defenses	43	1,194
Regular Coast Artillery required for all gun defenses of insular and canal defenses	220	5,040
Regular Coast Artillery required for one-half of all gun defenses of home defenses	796	18,547
Total Regular Coast Artillery required	1,228	29,751
Total Militia Coast Artillery required	796	18,547
Total force, regulars and militia, required	2,024	48,298

From the foregoing it will be seen that the present authorized strength of the regular Coast Artillery Corps is short 477 officers and 11,280 enlisted men of the strength required to man our coast defenses under the adopted policy outlined above.

The progress that has been made in the construction of the over-sea defenses will require that garrisons be provided for them at an early date. After manning all over-sea defenses now constructed or appropriated for, and all home mine defenses, there will remain but 319 officers and 7,267 regular Coast Artillery troops for the service of the gun batteries in the United States, which is less than one-fourth of one relief. It is evident, therefore, that the withdrawal of the Coast Artillery troops from the home coast defenses to provide garrisons for the over-sea defenses will make the weakness of the home garrisons a grave condition.

The Organized Militia is not provided by the States in sufficient strength to furnish its quota (one-half of one relief) of the manning detail for the gun defenses of the United States, as appears from the following table:

The Militia Coast Artillery organized and available for service as reported at the last annual inspection.

State.	Number of companies.	Officers.	Enlisted men.
Maine	12	48	639
New Hampshire	4	16	199
Massachusetts	12	49	742
Rhode Island	17	69	944
Connecticut	13	42	669
New York	31	110	1,897
Maryland	1	3	36
North Carolina	6	21	334
South Carolina	1	1	49
Georgia	4	14	182
Texas	1	3	61
California	12	37	712
Oregon	8	33	546
Washington	5	22	233
New Jersey	.....	.....	.....
Delaware	.....	.....	.....
District of Columbia	.....	.....	.....
Virginia	.....	.....	.....
Alabama	.....	.....	.....
Louisiana	.....	.....	.....
Total	127	468	7,243

The adequate manning of the home defenses thus assumes a grave aspect. It is, therefore, recommended that the States be urged to provide their due proportion of Militia Coast Artillery troops, and that suitable legislation be asked of Congress to provide for the proportion of Regular Coast Artillery troops required of the Federal Government in this manning force.

ENLISTED SPECIALISTS.

Among the technical noncommissioned staff officers of the Coast Artillery Corps called "enlisted specialists" there are three distinct classes—the electrical, whose duties are, briefly, to operate and maintain the electrical installation, searchlights, radio stations, etc.; the mechanical, whose duties are, briefly, to operate and maintain power plants, machine shops, etc.; the artillery, whose duties are, briefly, to maintain in thoroughly efficient condition the armament proper—guns, carriages, range and position finders, plotting boards, and all accessory devices connected directly with accurate and rapid firing of the armament.

These classes are equally important, and similar grades in each class should be given equal pay and allowances; the opportunity for advancement should be equal in all three classes, and promotion to any grade in any class should be limited to those holding the next lower grade in that class.

To the electrical specialists there should be added another division, viz: the radio operators, now needed in all coast defenses. These men are a product of the Coast Artillery School and their work is of the highest order. Since it can not be expected that men possessing their qualifications will remain in the service unless suitable provision is made for them, and since enlisted men can not be spared from the guns for use in radio stations, legislation is recommended to create a grade of electrician sergeants, third class. There should be 90 sergeants of this grade, which will provide 3 radio operators for each coast defense.

Because of the demands now being made and very soon to be made for enlisted specialists for the coast defenses of the insular possessions and Panama, substantial increase in the numbers of each class is a pressing necessity, and is earnestly recommended.

EFFICIENCY OF COAST ARTILLERY.

The Coast Artillery service for the past year has maintained its high standard. Its efficiency has attracted the attention of other Governments, especially those of South America. An officer of the Coast Artillery Corps of the United States is giving instruction to the Chilean Coast Artillery, and two Chilean officers are taking the course of instruction at the Coast Artillery School. The Government of Brazil has shown active interest in the coast defenses of the United States, and one of the objects of the recent visit of Dr. Lauro Müller, prime minister of Brazil to the United States, was to examine our coast defenses with a view to making recommendations to his Government in regard thereto. Permission has also been granted the Government of Brazil to send two officers to the Coast Artillery School to enter the next class.

ORGANIZATION AND ADMINISTRATION.

Districts.—An important change in the higher administration of Coast Artillery was made by General Orders, No. 9, War Department, February 6, 1913, under the provisions of which the Coast Artillery troops serving within the continental limits of the United States were organized into three Coast Artillery districts—the North Atlantic, the South Atlantic, and the Pacific. This organization has proved well adapted to the tactical and administrative needs of the Coast Artillery. In view of the size and importance of these commands, and of the fact that in the new scheme of Army organization, these districts correspond to brigades of the mobile army, it is believed that the commanding officers of these districts should have the rank of brigadier general. Another Coast Artillery district should be organized in the Philippines, to consist of the Coast Defenses of Manila Bay and of Subic Bay.

To complete the organization of the Coast Artillery I therefore recommend that a suitable bill be presented to Congress embodying the recommendations that the Coast Artillery Corps be increased by four general officers.

Coast defense commands.—A scheme for unifying the administration of coast defense commands, as described in the last annual report of the Chief of Coast Artillery (1912), after trial for a year in the Coast Defenses of Long Island Sound, was reported on by the commanding officer of those defenses as eminently successful in effecting a large saving in personnel, cost, and paper work. As a result of this trial, and of this favorable report, this system of administration has been put into effect in other coast defense commands.

FORTIFICATIONS.

Continental United States.—The system of fixed coast defenses for the United States recommended by the Endicott Board in 1886, and since modified by the National Coast Defense Board in 1906, has now practically been completed so far as relates to the installation of heavy gun batteries, with the exception of the entrance to Chesapeake Bay. San Pedro, Cal., the port of Los Angeles, has recently been added to the list of ports to be defended. Appropriations have been made to initiate both of these projects.

For the home ports of the United States, with the exceptions above noted, there now remain in the gun defense only the completion of the supply of ammunition and the extension of the standard fire-control system, including the necessary searchlights. These deficiencies are being supplied from year to year at a satisfactory rate, thanks to the liberal policy of Congress with respect to coast defense.

Consideration is invited to the increasing importance of San Diego, Cal., due to the rapid growth of its population, the deepening of its channel, and the position it will occupy relative to trade through the Panama Canal. It is recommended that the fixed defenses of this harbor be strengthened by two mortar batteries of four mortars each.

Philippine Islands.—Fortification construction continues at the entrance to Manila Bay, and has progressed to include the completion of Fort Frank, Carabao Island; that at El Fraile and Caballo Islands is making good progress.

Canal Zone.—In the Canal Zone battery construction has proceeded rapidly.

Oahu.—The seacoast defenses of Oahu as projected are now practically finished, with the exception of two rapid-fire batteries at Fort Kamehameha; these will be well advanced, if not completed, by the end of the present calendar year. The necessary personnel for both guns and mines has been sent to Oahu from time to time as these defenses have become ready for service.

Of the four Coast Artillery posts in Oahu, but one (Fort Ruger, with two companies) has been provided with permanent quarters. Permanent post construction is especially urgent at Fort Kamehameha, where three companies are now stationed and must live under canvas until provision is made for permanent barracks and quarters. This post is remote from Honolulu, located on low, sandy ground, and suitable shelter is necessary not only for the health and comfort of the garrison but as a matter of economy. An adequate water supply for this post should be given early consideration.

The pressing need for troops of the mobile army for the land defense at Oahu was emphasized by my predecessor in his annual report for 1909. This need is now being met, following the scheme for the defense of Oahu formulated by a board of officers, of which Brig. Gen. M. M. Macomb was president, which submitted its report September 6, 1912. This plan contemplates the service of certain guns emplaced for land defense by Coast Artillery troops.

Guantanamo.—A board of officers of the Army and Navy, appointed for the purpose of preparing a scheme of defense for the naval base of Guantanamo, Cuba, submitted its report in April, 1913. The first necessity for the development of Guantanamo as a protected naval base is the procurement of a supply of fresh water adequate to the needs of the proposed establishment. The board believes that such a supply can be secured.

SUBMARINE MINE DEFENSE.

With the exception of cable, the supply of the essential parts for the mine defense has been completed at nearly all fortified harbors.

Cable.—The need of making immediate provision for the additional cable necessary to complete these mine projects is an urgent one, and estimates to purchase this have been submitted for the next fiscal year.

On account of the need of an efficient mine field immediately upon the outbreak of war, the complete mining equipment of every harbor should always be kept on hand. The cable required to operate the mines, no less than the mine cases and the necessary electrical apparatus, must be manufactured to order and cannot be purchased in the open market. As submarine cable in commercial usage is usually bought under special specifications it is seldom carried in stock but is made up only when required by a particular purchaser. It should also be borne in mind that the conditions which our cable must meet, such as maximum reliability, minimum weight, long lengths on a reel, suitability for storage for indefinite periods, are such as pertain to our service alone, and the cable which is manufactured to meet these needs is a special article of manufacture, requiring special material and special care in manufacture.

Mine planters.—There are now eight mine planters provided for mining instruction in peace and for planting mines in case of war.

These planters have been normally distributed as follows: Atlantic coast, 4; Pacific coast, 2; Philippine Islands, 2.

The Fortification Bill passed in February of this year provided for mine equipment for Oahu. This equipment has in a great measure been provided and the personnel sent to Oahu for the mine defense. For the purpose of instructing the mine companies there the mine planter *Ringgold* was ordered in May, 1913, to proceed to Honolulu. As this vessel can not be spared from the Pacific coast, a mine planter should be provided for Oahu.

At Fort Mills, P. I., it has been necessary to supplement the use of the harbor boats by requiring the mine planters to perform a certain amount of passenger and freight service. This has resulted in seriously impairing the mine instruction of the Coast Artillery personnel. It is recommended that a harbor boat be provided for service at Fort Mills so that the mine planter may be at all times available for submarine mine and other artillery work.

As mine defense has been authorized for both ends of the Panama Canal it will be necessary to have a mine planter there. One planter with two distribution box boats and necessary yawl boats will suffice for both entrances.

Large distribution box boats to assist the planters are necessary in the Coast Defenses of San Francisco, Puget Sound, and Long Island Sound. Experience has shown that it is impracticable to plant mines sucessfully in the waters outside the Golden Gate, in certain parts of Puget Sound, and at the race in Long Island Sound, using the present type of distribution box boats. There will be no difficulty in doing so if longer, more seaworthy boats be provided. Two of these boats, 70 feet in length, have been provided for service in the Philippine Islands and two additional large boats are recommended, besides the distribution box boats required for Panama and Oahu.

Torpedo Depot.—The matériel required for the submarine mine defense is supplied from the Torpedo Depot at Fort Totten, N. Y., by the disbursing officer, who purchases and issues it under rules prescribed by the Secretary of War.

During the year this depot has continued to purchase and supply the matériel necessary for the maintenance and operation of the existing mine equipment; it has also supplied new equipment to localities where needed, and has designed and developed new matériel to meet the various requirements which have arisen.

Special attention has been paid to the revision of many of the specifications under which the principal items of the submarine mine equipment are purchased and inspected.

TARGET PRACTICE AND INSTRUCTION.

Target practice.—With a view to improving the accuracy of fire of coast guns, the following new features have been introduced in the Regulations for the Instruction and Target Practice of Coast Artillery Troops, 1913:

(*a*) Special attention to prediction work.

(*b*) Greater stress laid on careful handling and serving ammunition.

(*c*) Firing of trial shots immediately before record practice.

(*d*) Determination of the mean velocity from the trial shots by ballistic methods.

(*e*) A full analysis of each practice in each coast defense command by a board of officers convened for that purpose, which analysis is forwarded with the reports of all practices for that coast defense command.

Owing to the great cost of the material target and to the fact that in many cases it was impossible to determine the number of hits made thereon, and also because of the fact that it is a poor target for night practice, its use has been discontinued. The accuracy of fire is fully established by photographic observation methods.

Fire and battle command practice for 1912 provided good training at large posts for the field officers in the tactical employment of their commands, but the practice required that several targets be towed separately in different parts of the water area, and since this condition could be had only at a few posts it was thought best to discontinue that form of practice for 1913. The tactical training of field officers in their fire-action duties can be satisfactorily had in subcaliber practice, using small targets towed in the water area by the boats and launches which form the normal equipment of the coast defenses. Fire and battle commands will, however, be rated on the results of the service practice of the battery units composing these commands. A pennant has been provided for each fire and battle command attaining the highest rating in its class.

In the effort to approach service conditions one day practice and one night practice were prescribed wherever conditions of safety permitted night practice. A 10-day period was set aside for target practice, during which period all companies were camped in the vicinity of their respective batteries. Neither the date of the beginning of this 10-day period nor the time of firing for any particular battery was disclosed in advance.

The results of practice with rapid-fire batteries have not been satisfactory. Modifications have been introduced, involving better range finding methods, which it is hoped will reveal marked improvement during the current target year.

Special firing with mortars has demonstrated the fact that a director of fire several miles from a battery can so direct and control artillery fire as to obtain very accurate results. This fact opens up a new field in the application of such fire to cover remote water areas and the landward approaches to coast forts.

The firing of a limited number of armor-piercing and deck-piercing projectiles with high explosive charges has been recently authorized as part of our target practice scheme.

Mine work.—Action has been taken looking to the correction of a tendency of companies assigned to mines to give undue attention to the gun feature of their instruction at the expense of the mine feature. As a consequence of this tendency, certain mine companies have fallen short of a proper standard of mine efficiency. It may be said, in general, that mine companies are not as skillful in handling boats, tackle, and mine matériel as they should be. This tendency has been increased by a failure on the part of some coast defense commanders to allot sufficient time to the water duties of mine companies. An attempt to remedy this will be made in the next annual instruction order.

Infantry exercises.—The Infantry field exercises, as conducted in 1912, were instructive and highly beneficial. The officers detailed from the mobile army as instructors rendered valuable service, for which it is desired to express the fullest appreciation.

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E. M. WEAVER,
Brigadier General, Chief of Coast Artillery.

REPORT OF THE CHIEF OF THE BUREAU OF INSULAR AFFAIRS.

WAR DEPARTMENT,
BUREAU OF INSULAR AFFAIRS,
Washington, October 31, 1913.

SIR: I have the honor to submit the following report of the Bureau of Insular Affairs for the past year:

I. PHILIPPINE ISLANDS.

CHANGES IN PERSONNEL.

The following changes in the personnel appointed by the President have occurred since the last annual report:

1. Francis Burton Harrison, of New York, was appointed Governor General September 2, 1913, vice W. Cameron Forbes. Governor Forbes was appointed secretary of commerce and police and a member of the Philippine Commission, February 22, 1904; Vice Governor June 30, 1908, and Governor General November 11, 1909. His administration has been marked by a large increase in the domestic and foreign commerce of the islands and great energy in the prosecution of public works. Upon his departure from Manila he was given, both by individuals and the press, many evidences of the great esteem in which the Filipino people held him.

2. Mr. C. B. Elliott, secretary of commerce and police, resigned, effective February 1, 1913; Mr. Dean C. Worcester, secretary of the interior, on September 15, 1913. Vice Governor Gilbert, head of the department of public instruction, Commissioner Gregorio Araneta, head of the department of finance and justice, and Commissioner Frank Branagan have resigned, effective upon the qualification of their successors.

3. The following Filipino members of the Commission were nominated by the President and confirmed by the Senate on October 27, 1913:

Victorino Mapa, secretary of finance and justice.
Jaime C. de Veyra.
Vicente Ilustre.
Vicente Singson.

The appointment of the four gentlemen above mentioned and the retention of Mr. Rafael Palma as Commissioner gives for the first time a Filipino majority on the Commission.

4. Mr. Henderson S. Martin, as vice governor and secretary of public instruction, and Mr. Clinton L. Riggs, as secretary of commerce and police, were confirmed on November 29, 1913. The nomi-

nation of Mr. Winfred T. Denison as secretary of the interior is now pending in the senate.

The Philippine Commission when fully organized will be composed as follows:

Governor General and President of the Commission:
FRANCIS BURTON HARRISON.
Vice Governor and Secretary of Public Instruction:[1]
HENDERSON S. MARTIN.
Secretary of Finance and Justice:[1]
VICTORINO MAPA.
Secretary of Commerce and Police:[1]
CLINTON L. RIGGS.
Secretary of the Interior:[1]
WINFRED T. DENISON.
Members:
RAFAEL PALMA.
VICENTE SINGSON.
JAIME C. DE VEYRA.
VICENTE ILUSTRE.

LEGISLATION.

UNITED STATES TARIFF ACT.

The only important legislation passed by Congress affecting the Philippine Islands since the last report was contained in the tariff law approved October 3, 1913. This law made the following changes in the previous law governing trade between the United States and the Philippine Islands:

1. The limit in the amount of sugar and tobacco authorized to enter the United States free of duty was removed, and these two products will hereafter enter the United States free of duty, without limit as to quantity.

The provision excepting rice produced in the Philippines or in the United States from free entry into the United States or the Philippines, respectively, was repealed. This is unimportant, as there is no tendency to ship rice either way, but it strikes from the law an irritating exception to the general rule.

2. The provision in the preceding tariff laws that goods entitled to free entry to the United States coming from the Philippine Islands, and vice versa, must come as a direct shipment has been changed in the present law to provide that they may be shipped on a through bill of lading. The effect of this will be to allow transshipments en route either way.

3. The tariff act of 1909 provided that a Philippine product, fulfilling all other conditions for free entry, should be admitted free of duty into the United States if it did not contain foreign material to more than 20 per cent of its total value. This 20 per cent limit was inserted to protect the American tobacco industry.

It was hoped in the revision of the tariff that, while this 20 per cent limit would be continued in the case of manufactures of tobacco, it would be increased to 50 per cent for all other Philippine products.

[1] Four members hold administrative positions as heads of the four departments.

This would have given a much desired stimulus to the embroidery and lace industry in the islands which through the schools is being developed. There does not appear to have been any serious objection to making this change, but, although the bill as it passed the House contained this proviso, it was impossible to secure its adoption in the great rush of other matters confronting the conference committee. The effect therefore is to retain the provision of the old law in this respect.

The tariff bill affected existing Philippine legislation in other respects as follows:

1. All export duties on products shipped from the Philippine Islands were abolished regardless of the destination of the goods.

The importance of this legislation to the American trade is in the fact that it deprives the American manufacturer of Philippine products, principally Manila hemp, of the differential granted him formerly by the fact that he was exempted from the payment of export tax on hemp, whereas the foreign manufacturer of Manila hemp was required to pay this export tax. It has the effect of relieving the Philippine producer of an annual tax of approximately $1,500,000, $1,000,000 of which accrued to the treasury of the Philippine Islands, and $500,000 to the benefit of the consumer of hemp in the United States.

2. The provisions of former laws that all internal revenue collected in, or for account of the Philippine Islands, should accrue intact to the general government thereof and be paid into the insular treasury is continued, but the requirement that such revenues should be allotted and paid out by the Philippine Commission until action by the Philippine Legislature, approved by Congress, was stricken out.

This has the effect of giving to the Philippine Legislature the same authority over these funds as over other revenues of that government.

3. The income-tax provisions of the present law were extended to the Philippine Islands, with the proviso that it should be collected in the Philippine Islands by their own internal-revenue officers and accrue intact to the Philippine government.

The main provisions of the law affecting the Philippine Islands are shown in Appendix "A" on page 25.

NEEDED LEGISLATION.

SILVER-CERTIFICATE RESERVE.

Section 8 of the "Act to establish a standard of value and to provide for a currency system in the Philippine Islands," approved March 2, 1903, authorizes the use of silver certificates on the deposit of coined silver pesos in the Philippine treasury, and provides that the coin so deposited shall be retained in the treasury and held for the payment of silver certificates on demand and used for no other purpose.

It has been found in the Philippines, as elsewhere, that the certificates are far more convenient as a circulating medium than the coin, and as a result there is at present in circulation ₱15,112,437 [1] of

[1] ₱1 is equivalent to 50 cents United States currency.

the silver coinage and ₱31,568,431 of the silver certificates. The requirement that only coined silver shall be held in the reserve resulted in an inconvenience which was partly remedied by the act of June 23, 1906, which provides that the treasurer of the Philippine Islands, with the approval of the Governor General, might substitute for such silver pesos on deposit gold coin of the United States, which was not to exceed 60 per cent of the total amount of certificates outstanding. This had the twofold effect: First, of permitting an increase in the currency without awaiting the coinage of additional pesos; and, second, of materially increasing the intrinsic value of the reserve. The latter was incidental and of no particular value, in that the reserve had been sufficient from the first.

Experience has demonstrated the advantage of two modifications of the certificate-reserve requirement: First, the great convenience and added safety of keeping part of this reserve in the United States, rather than in the Philippine Islands; second, the Philippine government should be permitted to profit by the safe and conservative use of a part of this reserve. The government should be authorized to invest 75 per cent of such reserve in safe securities or to deposit on proper security this amount at interest in banks in the United States.

COMMERCIAL STATISTICS.

With the close of the fiscal year semiannual publication of "Foreign Commerce of the Philippine Islands" will be made from the office of the collector of customs at Manila, distribution to importers and exporters in the United States being made by this bureau, which will also keep in close touch with the commercial development of the islands through a condensed system of monthly reports.

Trade returns for the year show a generally favorable condition. Imports amounted to $56,327,583, an increase of $1,777,603 over those of 1912, but the serious shortage in local rice production, which made rice imports an exceptionally large factor in the import trade of both years, was relieved in the latter part of 1913 by abundant crops, and the elimination of this emergency element shows that whereas the net increase of 1912 over the previous year was $706,939, the increase in the general import trade in 1913, exclusive of rice, was $4,406,695. Exports were adversely affected as a result of crop conditions, but reduced production of some of the leading staples was more than offset by better prices and by the larger output of others, and the export total of $53,683,326 exceeded by $3,363,490 the high record of 1912.

The value of American goods imported shows an increase of $4,782,930, and amounted to $25,387,085, or 45 per cent of the total, against 38 per cent in 1912.

Approximately three-fourths of the $7,975,811 cotton-cloth trade for 1913 was of American manufacture, compared with 56 per cent in 1912, 50 per cent in 1911, 33 per cent in 1910, and 10 per cent in 1909, the last year prior to free trade.

Exports to the United States amounted to $19,848,885 and were 37 per cent of the total, as compared with 43 per cent in 1912. Sugar shipments, which were the leading factor in this decline, show a falling off approximating $5,000,000 in value.

IMPORTS.

Imports for the last 10 fiscal years, exclusive of gold and silver, were as follows:

Fiscal years.	From—		Total.
	United States.	Other countries.	
	Dollars.	*Dollars.*	*Dollars.*
1904	4,633,216	28,587,545	33,220,761
1905	5,761,498	25,114,852	30,876,350
1906	4,333,893	21,465,373	25,799,266
1907	5,155,359	23,630,496	28,785,855
1908	5,079,487	25,838,870	30,918,357
1909	4,691,770	23,100,627	27,792,397
1910	10,775,301	26,292,329	37,067,630
1911	19,483,658	30,350,064	49,833,722
1912	20,604,155	33,945,825	54,549,980
1913	25,387,085	30,940,498	56,327,583

EXPORTS.

Exports for the last 10 fiscal years, exclusive of gold and silver, were as follows:

Fiscal years.	From—		Total.
	United States.	Other countries	
	Dollars.	*Dollars.*	*Dollars.*
1904	11,102,775	19,147,852	30,250,627
1905	15,668,026	16,684,589	32,352,615
1906	11,579,411	20,337,723	31,917,134
1907	12,079,204	21,634,153	33,713,357
1908	10,323,233	22,493,334	32,816,567
1909	10,215,331	20,778,232	30,993,563
1910	18,741,771	21,122,398	39,864,169
1911	16,716,956	23,061,673	39,778,629
1912	21,517,777	28,802,059	50,319,836
1913	19,848,885	33,834,441	53,683,326

Statistics of the leading exports.

Fiscal years.	Copra.				Manila hemp.			
	Total.		United States.		Total.		United States.	
	Long tons.	Dollars.	Long tons.	Dollars.	Long tons.	Dollars.	Long tons.	Dollars.
1904	53,277	2,527,019	171	9,231	129,742	21,794,960	60,912	10,631,591
1905	36,963	2,095,355	202	14,425	128,564	22,146,241	72,196	12,954,515
1906	65,112	4,043,115	.....	.....	110,399	19,446,769	61,068	11,168,226
1907	48,306	4,053,193	1,092	108,086	112,895	21,085,081	57,469	11,326,864
1908	75,211	5,461,680	2,921	228,565	114,003	17,311,758	48,043	7,683,950
1909	103,897	6,657,740	4,639	287,484	147,621	15,833,577	77,958	8,534,288
1910	113,463	9,153,951	5,451	447,145	168,090	17,404,922	97,737	10,399,397
1911	113,776	9,899,457	12,047	1,030,481	163,033	16,141,340	65,494	7,410,373
1912	166,667	16,514,749	23,778	2,339,144	151,554	16,283,510	68,474	7,751,489
1913	111,269	11,647,898	7,342	726,245	142,292	23,044,744	62,708	11,613,943

Statistics of the leading exports—Continued.

Fiscal years.	Sugar.				Leaf tobacco.			
	Total.		United States.		Total.		United States.	
	Long tons.	Dollars.	Long tons.	Dollars.	Pounds.	Dollars.	Pounds.	Dollars.
1904	73,977	2,668,507	11,443	354,144	19,044,290	1,021,949	211	35
1905	111,849	4,977,026	56,948	2,618,487	16,276,266	1,005,404	.....	.....
1906	123,790	4,863,865	7,187	260,104	21,358,832	1,458,573	107,923	6,143
1907	118,395	3,934,460	6,506	234,074	29,910,788	1,957,488	.....	.....
1908	149,323	5,664,666	48,697	2,036,697	23,184,814	1,581,423	.....	.....
1909	110,604	4,373,338	20,949	881,218	23,561,853	1,662,269	.....	.....
1910	125,699	7,040,690	92,668	5,495,797	21,471,470	1,598,557	15,280	2,176
1911	147,016	8,014,360	126,889	7,144,755	26,812,233	1,794,480	9,720	1,700
1912	183,077	10,400,575	159,227	9,142,833	26,965,021	1,842,414	10,878	1,494
1913	209,182	9,491,540	82,625	3,989,665	29,060,665	2,005,667	84,822	13,151

Fiscal years.	Cigars.				Other exports.			
	Total.		United States.		Total.		United States.	
	Thousands.	Dollars.	Thousands.	Dollars.		Dollars.		Dollars.
1904	104,815	968,869	96	1,795	.....	1,269,323	.....	105,979
1905	106,786	971,177	336	6,790	.....	1,157,412	.....	73,809
1906	93,096	904,250	1,288	23,405	.....	1,200,562	.....	121,533
1907	116,719	1,051,621	1,593	26,067	.....	1,631,514	.....	384,113
1908	118,070	1,084,196	1,365	21,781	.....	1,712,844	.....	352,240
1909	115,977	1,083,702	2,696	43,818	.....	1,382,937	.....	468,523
1910	196,192	2,973,630	83,931	1,906,447	.....	1,692,419	.....	490,809
1911	132,217	1,700,712	22,974	625,244	.....	2,228,280	.....	504,403
1912	175,320	2,660,061	67,692	1,520,754	.....	2,618,527	.....	762,063
1913	207,396	3,356,748	96,432	2,098,123	.....	4,136,729	.....	1,413,758

RAILROADS.

General.—There were increases in the transportation business of most of the railroad companies. The operations of the Philippine Railway Co. suffered on account of severe storms. It is hoped, however, that the increase of the area under cultivation, particularly in Panay, will in a few years place this company in a much better position financially. The following table shows the kilometrage of all railroad lines authorized in the Philippine Islands on June 30, 1913:

Name of company.	Total kilometers authorized.[1]	Constructed.	
		In operation.	Not in operation.
1. Manila R. R. Co	1,312.7	761.6	67.5
2. Philippine Ry. Co	386.6	212.0	.....
3. Manila Electric R. R. & Light Co	52.7	47.4	.....
4. Manila Suburban Ry. Co	19.9	9.9	.....
5. Tarlac Ry. Co	20.6	.....	20.6
6. Daet Tramway Co	7.2	7.2	.....
7. Insular Coal Co.[2]	12.0	12.0	.....
Total	1,793.7	1,050.1	88.1

[1] One kilometer is equivalent to 0.62137 United States statute mile.

[2] Not a common carrier.

MANILA RAILROAD CO.

Under the provisions of Act No. 1905 the construction of the Manila Railroad has been progressing rapidly. This progress has been materially assisted by the passage of the gold-standard fund acts and the contracts which were signed by the railroad and the government on January 22, 1912, which make necessary the completion of the branch from Aringay, on the San Fernando de Unión line, to Baguio in two and one-half years.

Construction on the line to Baguio, the summer capital, which leaves the main line at Aringay, has been commenced. This branch will be about 39.9 kilometers in length. The grading on this line should be completed in the early part of 1914. The first tunnel out of Aringay is nearly completed and the other two are under way and should be completed in six or eight months. Twelve kilometers of rack track will be required, and an agent of the company has been in Europe ordering material and equipment for this part of the line.

The southern line of this company was definitely located in 1907 and 1908, with the exception of the portion between Lucena and Nueva Caceres. During the year the greater part of the line was located between Lucena and the head of Ragay Gulf, with a maximum grade of 1.2 per cent, and the grading has been prosecuted from four points along this line; but it was retarded somewhat, due to a lack of suitable ballast, which in the Tropics is a matter of great importance. A study was made of a deep-water harbor capable of development, and such a port was found near Lopez, Tayabas Province, at the head of Lamon Bay. It has been named Hondagua. Construction work was also carried on in Albay Provice during the year. The branch from Magdalena to Pagsanjan, Laguna Province, was opened for business August 1, 1912, and the remaining portion of the Lucena extension on February 10, 1913.

ANNUAL APPROPRIATION ACTS.

For the third consecutive year the two houses of the Philippine Legislature were unable to agree upon the annual appropriation act for the support of the government. The last act of this character (No. 1989) was enacted April 19, 1910.

BONDED INDEBTEDNESS.

The bonded indebtedness of the Philippine government, including the bonded indebtedness of the cities of Manila and Cebu, has not changed since the last report. It is as follows:

	Amount.	Redeemable.	Due.
Land-purchase bonds, 4 per cent	$7,000,000	1914	1934
Public works and improvement bonds, 4 per cent	2,500,000	1915	1935
Do	1,000,000	1916	1936
Do	1,500,000	1919	1939
City of Manila sewer and waterworks bonds, 4 per cent	1,000,000	1915	1935
Do	2,000,000	1917	1937
Do	1,000,000	1918	1938
City of Cebu sewer and waterworks bonds, 4 per cent	125,000	1921	1941
Total	16,125,000		

Ample sinking funds have been provided by law for the retirement of the above-mentioned bonds at or before maturity. The status of these sinking funds is satisfactory, and is set forth in detail in the annual report of the treasurer of the Philippine Islands.

RAILWAY BONDS.

During the fiscal year bonds of the Manila Railroad Co. to the face value of $1,375,000, and bonds of the Philippine Railway Co. to the face value of $161,000, were issued against completed construction. Under the terms of the concessionary grants, these bonds are guaranteed as to interest by the government of the Philippine Islands. To June 30, 1913, bonds so guaranteed as to interest were outstanding as follows:

Manila Railroad Co	$6,311,000
Philippine Railway Co	8,543,000

GOLD-STANDARD FUND.

Under the provisions of Act No. 2083, enacted by the Philippine Legislature December 8, 1911, there was transferred from the gold-standard fund to the general fund of the insular treasury, during the fiscal year, $444,769.02, making the total transfers on this account to June 30, 1913, $2,143,282.84. This addition to the ordinary revenues of the government provided means with which to continue the program of public works authorized by the Philippine Legislature. On June 30, 1913, the gold-standard fund consisted of $9,184,678.61, of which $2,857,139.50 was represented by loans to provinces, municipalities, and the Manila Railroad Co., the remainder being in cash.

SILVER COINAGE.

During the fiscal year ₱327,421.40 in Philippine silver coin, and Pfs. 5,574 in Spanish-Filipino coin, were shipped to the San Francisco mint for recoinage, under the act of Congress approved June 23, 1906. The total Philippine silver coin of the first issue shipped for recoinage under this act to June 30, 1913, was ₱30,103,031.80. New coin was shipped from the San Francisco mint to Manila during the year to the amount of ₱734,380.90, of which ₱50,000 were in copper and the remainder silver. For minting coin shipped during the year there was paid to the San Francisco mint $26,797.54. The total shipments of silver coin of the present standard to June 30, 1913, and the minor coinage on hand that date were:

Pesos	₱43,085,312.00
50 centavos	2,719,401.50
20 centavos	1,778,978.20
10 centavos	1,261,121.90
5 centavos	499,250.00
1 centavo	571,076.37
½ centavo	52,042.00
Total	49,967,181.97

PAPER CURRENCY.

During the fiscal year there were prepared by the Bureau of Engraving and Printing, United States Treasury Department, and

sent to Manila ₱2,000,000 in 2-peso notes, ₱1,000,000 in 5-peso notes, ₱2,000,000 in 10-peso notes, ₱2,000,000 in 20-peso notes, a total of ₱7,000,000. For preparing these notes there was paid to the Bureau of Engraving and Printing $17,515.43. Also there was purchased during the year at a cost of $4,345 distinctive paper for use in the manufacture of Philippine currency.

DEPOSITARIES IN THE UNITED STATES.

Since last report no new depositary in the United States for Philippine funds has been designated, and due to the consolidation of the Guaranty Trust Co. of New York and the Standard Trust Co., both of which were Philippine depositaries, there are at present 12 depositaries as against 13 for the year 1912. The deposits of the treasurer of the Philippine Islands with depositaries in the United States for the past 10 years are set forth in the following table:

June 30—	
1903	$3,184,261.40
1904	11,648,638.23
1905	11,984,429.87
1906	6,856,559.32
1907	13,061,095.86
1908	8,034,602.94
1909	10,376,313.40
1910	14,421,191.30
1911	12,908,977.19
1912	11,446,373.34
1913	9,893,019.37

INSULAR RECEIPTS AND DISBURSEMENTS.

The following is a comparative statement of insular receipts and disbursements of the Philippine Islands, exclusive of all items of a refundable nature, for the fiscal years ended June 30, 1912, and June 30, 1913:

	Fiscal year 1912.	Fiscal year 1913.
CREDITS.		
Balances from prior years	$8,239,312.93	$8,343,240.69
Revenues:		
Customs	8,908,123.64	7,774,944.74
Internal	4,729,710.67	5,044,231.47
Miscellaneous	287,488.56	225,755.09
Surplus, gold-standard fund	1,698,513.82	444,769.02
Total revenues	15,623,836.69	13,489,700.32
Supplies brought into account		27,370.10
Total credits	23,863,149.62	21,860,311.11
DEBITS.		
Expenditures:		
Bureaus and offices	9,638,369.80	9,576,538.83
Miscellaneous	381,496.15	487,015.72
Fixed charges	1,389,931.47	654,373.93
Aid to provinces and municipalities	144,655.00	842,436.72
Public works	3,338,963.85	3,184,835.80
Total expenditures	14,893,416.27	14,745,201.00
Supplies transferred and dropped	626,492.66	
Surplus:		
Cash	3,793,632.00	3,178,198.84
Supplies	2,657,344.03	2,611,476.19
Other	1,892,264.66	1,325,435.08
Total debits	23,863,149.62	21,860,311.11

EDUCATION.

(A) DIRECTORATE AND TEACHERS.

Since the last report on the work of the bureau of education it has lost its director, Mr. Frank R. White, by death. Mr. White had rendered most conspicuous service in the cause of education, and the high degree of efficiency of the bureau was largely brought about during his very able administration. Mr. Frank R. Crone has been promoted from assistant director to director, thus insuring the continuance of the policies which have resulted in such great progress educationally in the past few years.

The teachers secured from the United States have been almost without exception of splendid character and excellent preparation. This has been possible because of the greater interest taken in the United States in the work of the Philippine bureau of education.

With the elimination of those American teachers whose services for one reason or another have been unsatisfactory, it would be difficult to find a more efficient force than that at present in the service of the bureau.

While the quality of the American teaching force has advanced very materially, that of the Filipino teachers has kept pace and great advancement in their attainments and ability to teach is shown. Filipino teachers have been assigned to positions of greater responsibility as rapidly as possible and now 115 are serving as supervising and assistant supervising teachers, which number does not include 21 Filipino industrial supervisors.

(B) PROGRESS DURING THE YEAR.

Very steady and encouraging advance has been made during the past year. This marked advance is shown in the higher standard of the instruction in English, in the better school buildings and grounds becoming available, in the sounder basis on which industrial instruction has been organized, in the further and very marked improvement in the American and Filipino personnel connected with the work of the bureau, in the notable improvement in the efficiency of the administrative side of the work, and in the effectiveness with which the program for the physical training of the pupils enrolled in the public schools is becoming operative.

(C) INDUSTRIAL INSTRUCTION.

The program for industrial instruction for the public schools has been carefully worked out and includes most of the important Philippine industrial activities. It covers seven years of work—the four years of the primary course and the three years of the intermediate course—and provides instruction in agriculture, domestic science, needlework in its various forms, weaving of Philippine fibers, and work in wood, iron, and clay. Some industrial instruction is given to every pupil passing through the primary and intermediate grades. Specialization along one of the six lines is begun at once in the intermediate grades.

In order to show those interested in vocational and industrial training in this country something of the work of the Philippine

schools, the bureau has a small exhibit representative of almost every phase of the industrial work of the public schools there. This exhibit has been shown at different educational institutions and conventions in the United States during the past year—such as the meetings of the National Education Association, the National Society for the Promotion of Industrial Education, the Mohonk Conference, the "World in Chicago," and at Columbia, Chicago, and Ohio State Universities. It has also been displayed at various museums, including the National Museum in Washington, the Commercial Museum in Philadelphia, and the Fine Arts Museum in Chicago. It has been a very useful means of enlightenment as to one phase of our educational program in the islands.

(D) ATHLETICS.

Increased attention has been given to athletics, particularly to group games in which the majority of the pupils participate. A Far Eastern Olympiad was held in Manila in February, in which teams from China, Japan, and the Philippines took part. The majority of the contestants representing the Philippine teams were schoolboys, and they were victorious in every contest except baseball.

(E) FILIPINO STUDENTS IN UNITED STATES.

In view of the complete organization of the Philippine University with all of its colleges, the policy of sending Filipino students to the United States in large numbers for their undergraduate work is being discontinued. In its place provision has been made for appointment of a limited number of fellows, who have completed their undergraduate work, to enter graduate colleges and universities in this country and Europe for from two to four years' additional study. Under the provisions of this law appointments are being made as rapidly as students qualify in the prescribed examinations. Under the act of May 28, 1908 (35 Stat., 441), four cadets are under instruction at the United States Military Academy. The law provides that the Philippine Commission may designate one cadet for each class, and upon their graduation they shall be eligible to commissions in the Philippine Scouts.

PARCEL POST.

The Philippine Islands are included in the scope of the domestic parcel-post law, which became effective January 1, 1913. The rate between the Philippine Islands and any portion of the United States, including the District of Columbia, and the several Territories and possessions is 12 cents for the first pound or fraction of a pound and 12 cents for each additional pound or fraction of a pound.

II. PORTO RICO.

CHANGES IN PERSONNEL.

The following changes in the personnel, appointed by the President, have taken place since June 30, 1912:

(1) Gov. George R. Colton tendered his resignation, to take effect November 5, 1913, and Dr. Arthur Yager, of Kentucky, has been appointed to succeed him.

Gov. Colton by his resignation severs a connection of 15 years with the War Department, and there was transmitted to him, in accepting his resignation, the following letter from the Secretary of War:

WASHINGTON, D. C., *September 17, 1913.*

DEAR GOV. COLTON: I transmit herewith the letter of the President accepting your resignation as it was submitted by you and expressing to you his appreciation of your excellent service and his wishes for your future success. I desire to join in both of these expressions.

You are now severing a connection with this department which began with your entry in the service as lieutenant colonel of the First Nebraska Volunteers. Your service as an officer in the military establishment in the Philippine Islands, in the customs service of the Philippine Islands, in organizing the American receivership of customs in Santo Domingo, and as governor of Porto Rico has earned for you the uniform commendation of my predecessors. I desire to add to theirs my testimony of your faithful performance of many difficult duties.

With best wishes, I am, sincerely yours,

LINDLEY M. GARRISON,
Secretary of War.

(2) The resignation of Mr. M. Drew Carrel, the secretary of Porto Rico, was accepted, to take effect December 15, 1913. Mr. Carrel has served under the War Department in Cuba, in Santo Domingo, in the Philippine Islands, and Porto Rico, and with his resignation he severed a highly efficient service under the department of about 13 years.

(3) Edward M. Bainter was appointed commissioner of education, effective July 1, 1912.

(4) Martin Travieso, jr., and José C. Barbosa were reappointed members of the Executive Council on July 16, 1912, and Luis Sanchez Morales and Tulio Larrinaga on June 5, 1913.

LEGISLATION.

The only important congressional legislation affecting Porto Rico passed since the last report was the tariff bill, which applies to Porto Rico as it does to the continental United States.

The provisions of the new income tax were made operative in Porto Rico, and the administration of the law and the collection of the taxes imposed in Porto Rico shall be by the appropriate internal-revenue officers of that government, and all revenues collected in the island thereunder shall accrue intact to the general government thereof.

PARCEL POST.

Porto Rico is, for the purposes of the parcel-post law, which became effective in the United States on January 1, 1913, included in the term "United States."

COMMERCE.

The foreign trade of the island for the fiscal year ending June 30, 1913, aggregated $86,003,627, divided as follows: Imports, $36,900,062; exports, $49,103,565. This represents a decrease in value of imports of $6,026,411, and of exports of $601,848. Although the shipments of sugar were 16,000 tons greater than during the preceding year, reaching a total of 383,000 tons, the average price received—$16 less per ton—reduced the total value of the sugar ship-

ments for the greater quantity by approximately $5,000,000. The lower price of sugar is reflected in the curtailment of imports and purchases in the United States decreased during the year $4,269,540, and from other countries $1,756,871. The following tables indicate the relative values of foreign trade during the period 1901 to 1913:

TABLE No. 1.—*Exports.*

Years.	To—		Total.
	United States.	Foreign countries.	
1901	$5,581,288	$3,002,679	$8,583,967
1902	8,378,766	4,055,190	12,433,956
1903	11,051,195	4,037,884	15,089,079
1904	11,722,826	4,543,077	16,265,903
1905	15,633,145	3,076,420	18,709,565
1906	19,142,461	4,115,069	23,257,530
1907	22,070,133	4,926,167	26,996,300
1908	25,891,281	4,753,209	30,644,490
1909	26,394,312	3,996,913	30,391,225
1910	32,095,645	5,864,574	37,960,219
1911	34,765,409	5,152,958	39,918,367
1912	42,873,401	6,832,012	49,705,413
1913	40,538,623	8,564,942	49,103,565

TABLE No. 2.—*Imports.*

Years.	From—		Total.
	United States.	Foreign countries.	
1901	$6,965,408	$1,952,728	$8,918,136
1902	10,882,653	2,326,957	13,209,610
1903	12,245,845	2,203,441	14,449,286
1904	11,210,069	1,958,960	13,169,029
1905	13,974,070	2,562,189	16,536,259
1906	19,224,881	2,602,784	21,827,665
1907	25,686,285	3,580,887	29,267,172
1908	22,677,376	3,148,289	25,825,665
1909	23,618,545	2,925,781	26,544,326
1910	27,097,654	3,537,201	30,634,855
1911	34,671,958	4,115,039	38,786,997
1912	37,424,545	5,501,928	42,926,473
1913	33,155,005	3,745,057	36,900,062

TABLE No. 3.—*Statistics of leading exports.*

Fiscal year.	Sugar.	Cigars.	Coffee.	Oranges.	Pineapples.	Coconuts.	Grape fruit.
1901	$4,715,611	$306,115	$1,678,765	$84,475	.....	$8,334	.....
1902	5,890,302	1,549,235	3,195,662	51,364	.....	12,720	.....
1903	7,470,122	1,753,795	3,970,574	230,821	.....	326	.....
1904	8,690,814	1,460,496	3,903,257	352,646	.....	.....	.....
1905	11,925,804	2,152,051	2,141,009	125,422	.....	.....	.....
1906	14,184,667	3,074,226	3,481,102	295,633	$27,826	129,793	.....
1907	14,770,682	4,241,410	4,693,004	469,312	64,831	174,957	$7,586
1908	18,690,504	3,414,140	4,304,609	630,720	172,779	206,704	44,535
1909	18,432,446	4,383,893	3,715,744	401,912	442,780	204,498	76,310
1910	23,545,922	4,480,030	5,669,602	582,716	555,044	218,870	162,749
1911	24,479,346	5,355,223	4,992,779	703,969	641,291	258,168	309,698
1912	31,544,063	5,086,711	6,754,913	584,414	684 774	308,883	525,048
1913	26,619,158	5,800,686	8,511,316	740,091	1,142,348	353,690	726,811

Among the principal classes of imports during the past year were foodstuffs from the United States invoiced at $7,655,353, consisting in part of rice, valued at $5,069,527, and flour invoiced at $1,786,589. Cereal products to the value of $110,426 were received from other

countries. Importations of cotton goods aggregated in value $3,933,540; manufactures of iron and steel, $3,173,025; meats and meat products, $3,283,993, mostly from the United States; dairy products from the United States $288,465, and from other countries, 417,916. Importations of leather goods are represented by a value of $1,472,028. The importations of the year indicate no change so far as the nature of the commodities is concerned from that of previous years, but in quantity and value there appears to have been a decrease in nearly all classes except food supplies and other articles of prime necessity.

RECEIPTS AND EXPENDITURES.

A comparative statement of all receipts and disbursements of Porto Rico for the fiscal years 1911, 1912, and 1913, expressed in United States currency, follows:

Revenues.	Fiscal year—		
	1911	1912	1913
Customs	$1,065,998.95	$1,180,592.90	$1,028,291.95
Internal	2,571,450.02	2,778,231.32	2,732,656.88
Miscellaneous	349,296.87	410,339.73	621,595.19
Total revenues	3,986,745.84	4,369,163.95	4,382,544.02
Other receipts:			
Repayment of loans to municipalities	79,659.81	74,974.82	115,831.51
Repayment of loans to school boards	38,943.41	35,098.13	25,064.74
Repayments to appropriations and transfers	324,054.70	956,986.53	903,610.75
Total receipts	4,429,403.76	5,436,223.43	5,427,051.02
Expenditures:			
Legislative	60,596.60	58,673.37	112,697.38
Executive	3,137,017.42	4,022,807.95	3,798,454.81
Judicial	443,366.36	461,383.91	496,144.13
Miscellaneous	153,268.01	127,687.61	369,801.10
Construction and maintenance of insular roads and bridges			186,666.24
Total expenditures	3,794,248.39	4,670,552.84	4,963,763.66
Other disbursements:			
Loans to municipalities	19,200.00	32,700.00	517,508.25
Loans to school boards	17,385.86	294.60	5,000.00
Repayments to appropriations and transfers	95,591.31	152,122.20	805,308.66
Total disbursements	3,926,425.56	4,855,669.64	6,291,580.57

SANITARY CONDITIONS.

Due to the density of the population and the dense ignorance of the people of even the elements of hygiene at the time of American occupation, coupled with a lack of funds to install an extensive sanitary service, sanitation on the island, judged by American standards, is still in a very crude state, but within the limits of the means provided the sanitary service has made commendable progress. Among the many difficulties to be overcome are: Lack of good water supply, an almost total lack of good sewerage and garbage-disposal system, insanitary disposition of offal of slaughterhouses, lack of sanitary markets and the protection of food products in their manufacture and disposal for sale, lack of hospital facilities, overcrowding and insanitary condition of municipal jails, some of which are used for the detention of violent insane persons; congestion in the homes of the laboring classes, and contamination of milk supply.

At the close of the present fiscal year the civil-service roll of the sanitary service contained 312 positions, of which all but 10 were held

by Porto Ricans. This necessitated a great deal of work on the part of the Americans and Porto Rican medical officers to educate sanitary inspectors and other agents of the service. One of the most difficult things with which the service has to contend is the lack of vital statistics. Except in the larger towns it has been found impossible to ascertain the cause of death in the majority of cases, due to the fact that there are no doctors. Statistics covering births and deaths are accurate, however, as these can be obtained from church and cemetery records. Infant mortality under the age of 5 years constituted nearly 50 per cent of the total deaths during the year. The reasons for this are being investigated, and it is believed that in so far as such excessive mortality may be traceable to poor milk supply a remedy may be found in the near future.

The sanitary service as at present organized, in addition to its ordinary duties of preventing epidemics, involves inspection of all public buildings throughout the island, as well as the private ones where transmissible diseases are known to exist, the eradication of mosquitoes, the approval of plans and the inspection of buildings as to sanitary engineering, biological laboratory work, veterinary inspection, the study of transmissible diseases, the enforcement of pure food and drug regulations, and the preparation of vital statistics.

During the year there were 41,002 births, or 35.19 per thousand; 16,400 marriages, or 14.08 per thousand, and 26,034 deaths, or 22.35 per thousand.

BUBONIC PLAGUE.

In June, 1912, an authentic case of bubonic plague was discovered in San Juan. Energetic measures were immediately begun to check the spread of the disease, an effort being made to limit it to the island on which the city of San Juan is located, but without success, as it spread to some outlying barrios. The vigorous measures instituted limited the loss of life to 36, but during the outbreak a business panic prevailed, and as the loss of life was not great, due to the promptness with which it was attacked, the people as a whole did not realize the gravity of the situation or take kindly to the sanitary regulations. Influences—personal, political, fraternal, and religious—were brought to bear in an endeavor to have the sanitary regulations modified, but without avail. It was definitely established that the plague was introduced from the Canary Islands, where the health authorities admitted that it had prevailed for some time, but had been concealed from the world. The extermination of rats was undertaken on a large scale throughout the island, and particularly in San Juan, and specimens of dead rats were constantly examined at the laboratory at San Juan for detection of plague. The last rat found infected with plague in San Juan was discovered on September 10, 1912, and the last one in the island on December 21, 1912.

Assistance was given the Porto Rican authorities by the United States Army, the Public Health Service, and the Government of St. Thomas sent a medical officer to study and assist in the work of stamping out the epidemic. The epidemic, however, served one useful purpose, which was to increase the interest of the people in their sanitation service, and thus insure its being put upon a more satisfactory basis.

EDUCATION.

The daily average attendance in the public schools during the year was 117,360, out of a total enrollment of 161,785, both of which figures show slight increase over the preceding year. According to the census of 1910 there are more than 390,000 persons of school age in the island, so that, notwithstanding the efforts made by the Department of Education, the average attendance was only 30.9 per cent of the school population. As compared with the total enrollment of 161,785 for the year, however, the total enrollment at the close of the Spanish régime was only 44,861. In 1910, 168,477 males of voting age, or 68.2 per cent of the total electorate, were illiterate.

The pressure for more funds for the purpose of extending educational facilities throughout the island was met by an increase in the appropriation for school purposes of more than $1,000,000, which will increase the accommodations so as to provide for 30,000 more pupils.

A change in the law, under which municipalities can borrow money from the insular government for public works and improvements on the basis of bond issues guaranteed by the said government, has made over $1,500,000 available to municipal school boards for the construction of buildings. The Legislative Assembly made available $150,000 for the construction of four high-school buildings, in addition to the four now in use, on the condition that the municipalities in which they are located contribute $90,000 more for their erection and equipment.

Provision was also made for five industrial and agricultural schools in different parts of the island. Much interest has been awakened in domestic science by the introduction of such a department in the Central High School at San Juan. Special attention is being devoted throughout the educational system to manual training, household economy, agriculture, and commercial studies, while physical culture and military instruction command enthusiastic interest. In San Juan a night trade school was opened with classes in carpentry, bricklaying, plumbing, and automobile mechanics, in all of which trades there is a local scarcity of skilled workmen.

IRRIGATION SYSTEM.

During the year great progress has been made on the irrigation system. The first surveys leading up to the installation of this system were provided for in 1907, when a small appropriation was made for a preliminary investigation. This was increased in 1908 by an appropriation of $25,000, as a result of which the general plan was drawn up and submitted to a board composed of the Chief of the United States Reclamation Service and the consulting engineer of that service, which, with some modifications, was approved by them. The rough estimate for the whole system at that time was placed at $3,000,000, but it was known to be only approximate, as complete data had not yet been secured. As a result of work of the present year it has been definitely established that the actual cost of construction of the completed project will not exceed $4,000,000, which estimate was agreed upon as soon as work was actively undertaken.

The area to be covered by the system embraces some 40,000 acres of very fertile sugar land lying on the south side of the island, where the rainfall is variable and no means have heretofore existed for conserving the water supply.

The principal reservoirs, Patillas, Carite, and Guayabal, have a combined capacity of 11,000,000,000 gallons of water. Part of the water from the Guayabal Reservoir is brought from the northern side of the main watershed of the island through a tunnel which presents a possibility of power development, while it is estimated that 2,000 hydroelectric horsepower will be developed on the aqueduct supplying the Carite Reservoir.

The scheme has been financed through the issue of bonds guaranteed by the insular government, payment of principal and interest of which is to be ultimately met by an assessment on the lands benefited by the irrigation system. It is estimated that the assessments will not extend over a greater period than 43 years, and never exceed $15 per acre annually.

III. DOMINICAN CUSTOMS RECEIVERSHIP.

The following changes in personnel, appointed by the President, have occurred since the last report:

Mr. W. E. Pulliam, the general receiver of Dominican customs, was relieved by Mr. Walker W. Vick, effective June 16, 1913, and Mr. J. H. Edwards was succeeded as deputy general receiver on October 22, 1913, by Mr. John T. Vance, jr.

Mr. Pulliam was detailed as special agent, Philippine customs service, in March, 1901, resigning this position in May, 1903, to reenter the United States Treasury Department service. He resigned from this position in September, 1903, to accept appointment as special deputy collector of customs of the Philippine Islands, which position he held until appointed on June 6, 1907, as general receiver of Dominican customs.

Mr. Edwards entered the government service in March, 1899, as a stenographer in the Philippine customs service, and served as clerk, traveling auditor, and special agent until 1905, when he was sent to Santo Domingo to assist in the organization of the customs receivership, where he has served until the appointment of his present successor.

The sixth year of the operation of the receivership shows the largest customs receipts in its history, the gross receipts being $4,112,735.16. This is the more remarkable because of the political disturbances in the Republic during the year. The volume of the foreign trade of the Republic continued to expand. Imports amounted to $8,217,898, an increase of $1,268,236 over the previous year, while the export total of $12,385,248 was larger by $1,389,702. The prominence of the United States in both branches of trade became more conspicuous and American goods constituted 62 per cent of all imports, and 59 per cent of exports found an American market. The following table gives an outline of all receipts and disbursements since the beginning of American control:

Statement, by fiscal years, of the customs service, Dominican Republic.

	Under modus vivendi, Apr. 1, 1905, to July 31, 1907.	Under convention of Feb. 8, 1907.						Total.
		Aug. 1, 1907, to July 31, 1908.	Aug. 1, 1908, to July 31, 1909.	Aug. 1, 1909, to July 31, 1910.	Aug. 1, 1910, to July 31, 1911.	Aug. 1, 1911, to July 31, 1912.	Aug. 1, 1912, to July 31, 1913.	
DEBITS.								
Expenditures:								
Salaries and expenses, all ports	$163,938.00	$83,071.13	$82,196.36	$85,820.61	$91,823.10	$94,142.13	$96,615.51	$697,606.84
Salaries, office comptroller and general receiver	83,560.76	44,494.70	53,955.68	51,475.40	52,341.54	52,070.82	56,714.33	394,613.23
Interest and exchange	19,155.67	12,185.71	10,831.17	9,566.25	9,868.65	10,605.69	13,543.29	85,756.43
Operation of revenue cutter service	114,662.39	29,125.69	33,261.25	29,532.18	35,653.08	30,926.58	32,129.50	305,290.67
Customs and frontier guard expense	102,797.09	42,095.75					10,286.61	155,179.45
Payments:								
Dominican Republic	2,897,100.81	1,408,137.61	1,846,942.00	1,408,527.60	2,022,000.00	1,966,200.00	1,747,400.00	13,296,308.02
Fiscal agency account	3,148,764.32	1,663,977.03	1,139,118.10	1,265,000.00	1,295,820.90	1,424,092.24	1,632,772.25	11,569,544.84
Indemnities	11,426.85	655.15		5,000.00				17,082.00
Railroad construction	143,557.98	30,937.75						174,495.73
Other disbursements:								
Refunds	16,382.81	6,866.40	5,043.50	5,225.31	13,219.43	21,624.31	16,969.00	85,330.76
Refundable collections refunded	29,536.58	14,155.28	13,145.02	13,091.85	14,597.06	15,523.76	14,013.66	114,063.21
Concession benefits	103,967.13	41,938.08	19,765.59	6,302.68				171,973.48
Disbursed account building fund							12,431.29	12,431.29
Deposited on account of loan authorized by act of Dominican Congress approved Dec. 14, 1912							210,000.00	210,000.00
All other disbursements	10,919.39							10,919.39
Balances on hand July 31, 1913:								
Balance due Dominican Republic							88.24	88.24
Unremitted balances in hands of deputy receivers							202,245.23	202,245.23
Building fund							63,833.97	63,833.97
Due fiscal agent, account surplus calendar year 1913							182,497.10	182,497.10
	6,845,769.78	3,377,640.28	3,204,258.67	2,879,541.88	3,535,323.76	3,615,185.53	4,291,539.98	27,749,259.88
CREDITS.								
Collections:								
Gross customs receipts	6,815,756.49	3,454,955.41	3,345,712.67	2,863,874.32	3,419,141.86	3,630,451.03	4,095,280.56	27,625,172.34
Other receipts, personal fees refunded	29,536.58	14,155.28	13,677.04	13,101.85	14,597.06	15,523.76	14,013.66	114,605.23
Miscellaneous receipts	51.33			3,018.89	1,548.49	1,422.66	3,440.94	9,482.31
Total	6,845,344.40	3,469,110.69	3,359,389.71	2,879,995.06	3,435,287.41	3,647,397.45	4,112,735.16	27,749,259.88

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The SECRETARY OF WAR.

FRANK MCINTYRE,
Brigadier General, U. S. Army, Chief of Bureau.

REPORT OF THE PHILIPPINE COMMISSION.

MANILA, *September 30, 1913.*

SIR: The Philippine Commission has the honor to submit its fourteenth annual report, which covers the fiscal year ending June 30, 1913.

LEGISLATION.

EXCLUSIVE LEGISLATIVE JURISDICTION OF THE COMMISSION.

Acting within its exclusive legislative jurisdiction over all that part of the Philippine Islands inhabited by Moros or other non-Christian tribes, the Commission enacted during the fiscal year 23 laws, of which the following are the more important:

An act making immediately available the sum of fifty-seven thousand pesos of the amount appropriated by act numbered twenty-one hundred and eighty-five for the construction of wireless telegraph stations in that part of the Philippine Islands inhabited by Moros or other non-Christian tribes.

An act prohibiting, in the territory inhabited by Moros or other non-Christian tribes, the forcing, compelling, or obliging of any laborer or other employe to purchase merchandise, commodities, or personal property under certain conditions.

An act providing an additional associate judge of the court of land registration for the Moro Province, the Mountain Province, the province of Agusan, and the province of Nueva Vizcaya, and for other purposes.

An act authorizing the municipality of Zamboanga to incur an indebtedness of one hundred and fifteen thousand dollars in money of the United States, and to issue bonds covering the amount of said indebtedness, payable in gold coin of the United States, for the purpose of providing funds to construct necessary sewer and drainage facilities, to secure a sufficient supply of water and necessary buildings for primary public schools in said municipality, pursuant to the provisions of sections sixty-six, sixty-seven, sixty-eight, and sixty-nine of the act of Congress approved July first, nineteen hundred and two, entitled "An act temporarily to provide for the administration of the affairs of civil government in the Philippine Islands, and for other purposes," as amended.

An act to authorize the Governor General to grant to the authorities of the United States Army in the Philippine Islands the privilege of using the current of the Bued River for the purpose of operating a hydroelectric plant and a pumping station, and for other purposes.

AS A CHAMBER OF THE PHILIPPINE LEGISLATURE.

The first regular session of the Third Philippine Legislature convened on October 16, 1912, and continued in session until and including February 3, 1913. A special session was called by proclamation of the Governor General for the days February 6 to 11, inclusive. These were the only sessions of the Legislature held during the fiscal year.

During these sessions there originated in the Commission as a chamber of the Philippine Legislature 71 bills, of which 61 were passed by the Commission and sent to the Assembly. The Commission considered and acted on 131 bills of the Assembly. The total number of bills finally agreed upon by both Houses and enacted into law was 69, of which 18 originated in the Commission, and 51 in the Assembly. Of these laws the following are the more important:

An act appropriating the sum of fifty thousand pesos, Philippine currency, out of any funds in the insular treasury not otherwise appropriated, for the extermination of locusts in accordance with the provisions of act numbered twenty-one hundred and twenty-one.

An act providing that the assessment of, and tax on, real and personal property shall not include machinery as herein defined.

An act to afford relief to sufferers from the typhoons of October and November, nineteen hundred and twelve.

An act further to amend section thirty-three, chapter four of act numbered nine hundred and twenty-six, entitled "The public land act," as amended, by providing for the granting of free patents to native settlers until January first, ninteen hundred and twenty-three.

An act appropriating the sum of two hundred thousand pesos, Philippine currency, for the purchase of the library of the Compañia General de Tabacos de Filipinas at Barcelona, Spain, under certain conditions.

An act to provide for an exposition of Philippine products in the city of Manila in the year nineteen hundred and fourteen.

An act appropriating funds for the Philippine Exposition.

An act to establish stations for practical instruction in matters concerning agriculture and a system of agricultural demonstration and development.

An act authorizing certain measures for improving the planting, curing, and preparation of tobacco.

An act authorizing the investment of a portion of the surplus remaining from the sale of the friar lands bonds in the purchase of certain additional friar lands, situated in the municipalities of Biñan and Santa Rosa, province of Laguna.

An act providing for the registration of patents and patent rights in the Philippine Islands, and for the protection of the same.

An act providing for the increase of the pay of the privates and members of the band of the Philippine Constabulary, and for other purposes.

An act to provide for the revision and correction of land-tax assessments, the valuation of newly declared real property for the purposes of taxation, and for other purposes.

An act amending section twelve of act numbered one hundred and ninety, as amended, by providing that until January first, nineteen hundred and twenty, both English and Spanish shall be official languages, and for other purposes.

An act to provide for the record of mortgages or trust deeds issued by public service corporations to secure bonds, and for other purposes.

An act to regulate the practice of veterinary medicine and surgery in the Philippine Islands.

An act giving to the Governor General in behalf of the government of the Philippine Islands and to municipalities and provinces the right to acquire for public use real property of private ownership by condemnation under judicial process and conferring on courts of first instance exclusive original jurisdiction thereof, and for other purposes.

An act appropriating the sum of four hundred thousand pesos for the establishment of colonies and plantations for the cultivation of rice and other food cereals, for the better distribution of the population of these islands, and for other purposes.

An act prohibiting manufacture, possession, and sale of dynamite and other explosives without a special permit, providing a penalty therefor, and for other purposes.

An act amending sections forty-six, forty-seven, fifty, fifty-seven, seventy-five, and seventy-six, of act numbered one hundred and eighty-three, entitled, "An act to incorporate the city of Manila," and adding at the end thereof a new section numbered eighty-nine; by providing that the rate of the annual tax on the assessed value of real estate for the city of Manila shall be one and one-half per cent; enlarging the powers of the city assessor and collector in the matter of the assessment and collection of said tax; providing for the assessment and collection of special taxes for public improvements, and for other purposes.

An act providing certain special proceedings for the settlement and adjudication of land titles.

A variety of important matters were considered by the Legislature, but failed of final passage; of these the following originated in the Commission:

An act authorizing the Secretary of Commerce and Police with the approval of the Governor General to contract with any railroad company in the Philippine Islands for the construction and maintenance of joint railroad and highway bridges on its lines of railroad, appropriating the sum of five hundred thousand pesos to pay the government's proportion of the cost of construction and maintenance of the bridges so contracted for, and providing for the apportionment by the Governor General of the expense of maintenance of such bridges between the provinces and municipalities concerned.

An act creating the office of shipping commissioner, defining his duties, regulating the shipment and discharge of seamen in domestic vessels and the adjudication of wage disputes in certain cases.

An act creating the crime of habitual criminality and providing punishment for the same.

An act prohibiting slavery, involuntary servitude, peonage, and the sale or purchase of human beings in the Philippine Islands, and providing punishment therefor.

An act to prohibit the introduction into the Philippine Islands and the manufacture, sale, or public exhibition therein of moving-picture films or of pictures of immoral, indecent, obscene, vicious, or a disorderly character or tendency.

An act prescribing the manner in which municipal councils shall grant the privilege of running cockpits; providing for a license tax for fighting cocks; prohibiting women, children, and public officers from entering cockpits, and for other purposes.

An act to amend the municipal code by requiring municipal councils to regulate or to prohibit the maintenance of dance halls, and to amend the charter of the city of Manila by giving the municipal board power to regulate, license, fix the location of, or prohibit the same.

The following originated in the Assembly:

An act authorizing the appointment of a board for the development and promotion of agriculture.

An act reestablishing the office of provincial engineer and amending the provincial government act and its amendments.

An act amending act numbered fourteen hundred and fifty-nine, known as the corporation law, by adding a chapter on agricultural credit associations.

An act providing for the adoption of military instruction in the public schools of the Philippine Islands.

An act establishing an asylum for orphans, invalids, and old persons, and providing funds for the organization and operation thereof, and for other purposes.

An act to create rural guards in all the municipalities organized under act numbered eighty-two, and for other purposes.

An act authorizing the creation of provincial banks under certain conditions and limitations, and for other purposes.

An act regulating the manner of acquiring and recovering Philippine citizenship.

An act appropriating funds for the erection and maintenance in the city of Manila of a tuberculosis hospital and for the improvement of the attendance and treatment of the insane confined in the San Lazaro Hospital and the Hospicio de San José, in the discretion of the director of health.

An act providing for an increase of the municipal school funds.

An act to promote workmen's wards [sanitary villages or districts].

The acts passed by the Commission and the Legislature during the fiscal year are numbered 2188 to 2279. Certified printed copies of all of these have heretofore been furnished.

The Legislature having failed to pass the appropriations for the current expenses of the government for the fiscal year 1914, section 7 of the act of Congress of July 1, 1902, became operative, and the expenses necessary for the support of the government are being paid in accordance with the provisions of said section.

CONDITION OF TRADE.

The total volume of the trade of the islands for the year just closed shows a satisfactory development, though its rate of increase for the first months of the year was not quite maintained toward the last. This was mainly due to an extensive falling off in the importation of rice, which amounted to but $7,940,857, as against $10,569,949 for the preceding year—a decrease of nearly 25 per cent. This decrease in the importations of the principal cereal food of the country is not in itself unwelcome, for it means an immense saving to the population at large. It is directly traceable to the particularly abundant crop at the last harvest, which marked the end of the disastrous shortage following the severe drought of 1911–12.

Our foreign trade increased from $104,869,816 to $110,010,859, or a trifle less than 5 per cent. The increase in imports from $54,549,980

to $56,327,533 was only about 3¼ per cent; but if rice, the only item which showed a great decrease, be excluded, the increases in imports and exports, the latter from $50,319,836 to $53,683,326, were about the same, 8 and 7 per cent, respectively. The imports of rice this year formed about the same percentage of the total imports that they formed every year from 1905 to 1910—that is, during the years when the local supply was normal.

Apart from rice there were increases in most classes of merchandise imported, though meat and dairy products showed a small decrease, and importations of live cattle continued to fall off as a result of the necessary application of strict quarantines against animal diseases. There was an increase of 24 per cent in cotton goods, of which goods the United States this year supplied 59 per cent, as against about 7½ per cent in 1908 and 1909. Such proof of the stimulation of American trade with the islands by the removal of the former restrictions seems to require no comment. Imports of iron and steel products increased 9 per cent. More than four-fifths of this increase was accounted for by imports of machinery, which formed 40 per cent of the total, more than a third of which was in sugar machinery alone; of this last more than a half came from the United States and Hawaii. Other imports which showed considerable gain were flour, illuminating oil, leather goods, chemicals, drugs and dyes, vegetable fibers, fish and fish products, coal and cement. Except in the last two, the United States figured exclusively or largely in these increases.

The bulk of the exports from the Philippines continued to be the four staple agricultural products, manila hemp, copra, sugar, and manufactured tobacco. The exports of hemp during the year decreased in quantity, but increased in value 42 per cent. This increase restored hemp to first place among exports, from which it had been ousted by copra in 1912. So great a relative increase in values of exports was of course coincident with a large rise in average price, which was $105 per ton for 1912, but $159 for 1913. Some authorities believed at the time that this increase was largely speculative, and it was certainly not maintained at its highest level for any length of time. From $226 per ton in February of this year it fell to $152 in June and to less than $120 in July. The prices, however, have still remained high enough to make it fairly safe to say that the recovery from the extremely depressed condition of the trade which reached its worst phase in 1911 and 1912 is more than merely temporary.

Exports of copra and sugar both fell off materially, the former by 30 per cent in value and more than that in quantity; the latter increased in quantity but decreased 9 per cent in value. In the case of copra this heavy loss was coincident with a general rise in price. It seems safe to say, therefore, that the difficulty was a shortage in supply rather than in demand, and this is confirmed by what is known of the damage done to the coconut plantations in the last two years by typhoons and drought. The decrease was greatest in the case of exports to the United States, amounting to more than two-thirds both in quantity and value and, as importers there appeared unwilling to meet the increase in price referred to, which had gone on steadily until the average for last year was more than twice that for 1903, it seems uncertain how quickly this branch of trade, which appeared so promising last year, will be restored. Due to the poor

quality of our sugar, its price fell very materially, though it was still better than for any year prior to 1909. In the case of this commodity also, the decrease showed itself especially in the shipments to the United States, which fell off nearly a half in quantity and more than a half in value.

The exports of all classes of tobacco manufactures showed satisfactory increases during the year. The shipments of cigars increased 19 per cent in number and 25 per cent in value. This seems to indicate a complete recovery from the slump of 1911, which came from an overexpansion following the tariff act of 1909. The record of 1910, 196,000,000, which was closely approached in 1912, was this year exceeded, the figure being 207,000,000. This increase was in large part absorbed by the United States, whose purchases increased 41 per cent in quantity and 36 per cent in value. The average price of exported cigars was the highest yet recorded, although the prices of those shipped to the United States, while still far higher than for any year prior to 1910, decreased slightly from last year. There is, however, a strong local conviction that, despite the continued improvement in price, the Philippine exporters are not securing the return that the quality of their product merits. Exports of cigarettes have never been relatively important, though they increased largely during the past year. Shipments of unmanufactured tobacco, mainly leaf, increased moderately, but, as in previous years, the share of the United States in this item was negligible.

A few points of interest are to be noted in connection with the exports of commodities other than these great staples. Shipments of coconut oil rose from almost nothing during the preceding year to the respectable figure of $315,513. It is highly desirable that the freight cost on exports should be decreased, and some of the available profit kept in the country, by developing the manufacture of certain products derived from the great agricultural staples of the islands. The manufacture of cordage, another such industry, has also made a fair start. Exports of the products of household industries of the islands, which first became noticeable the last two or three years ago, did not for the most part make a very good showing during the year; shipments of embroideries increased, but those of native cloths, knotted hemp, and hats declined. In making knotted hemp into braid the islands have not been able to compete with Japan. Exports of maguey and lumber increased heavily; the latter, which should, when the valuable forests of the islands have been developed to approximately the full extent of their productivity, form a very important item, have marked a gain of more than 200 per cent. Exports of such agricultural products as cacao and numerous varieties of fruits, for the growth of which the Philippines are eminently adapted, remain negligible. Exports of gold bullion from Philippine mines are not included in the above total. First appearing in 1912, they reached a value of $77,849; during the past year this was increased nearly tenfold to $729,503.

In the distribution of Philippine trade among the various countries dealt with, the United States continues to maintain the primacy which she naturally gained with the establishment of free trade in 1909. Her share of the total trade for the past year was $45,617,517, or 41.5 per cent. This is a larger percentage than for any year except 1911, when it reached a slightly higher figure. Her share of

the imports amounting to 45.5 per cent of the total was relatively greater, because of large increases in the importations of American cottons, iron and steel, flour, and boots and shoes. Exports to the United States, on the other hand, fell off 7.6 per cent in amount and formed a relatively low percentage of the total exports, 37.2, although it was still greater than for every year prior to 1910 except two. This falling off was due to smaller purchases of sugar and copra. The total trade with Great Britain, which stood second on the list, increased moderately, while that with France decreased somewhat. The rice-producing countries lost relatively, though the French East Indies still stood second on the export list.

COMMERCIAL AND BUSINESS STATISTICS.

The tables which were given in the annual report of the Commission for 1912, showing, as evidence of commercial and financial activity, the total trade of the islands and the mercantile, manufacturing, and common carrying business on which is levied an internal-revenue tax of one-third of 1 per cent, may be brought to date as follows:

Foreign commerce.

Fiscal year.	Trade with foreign countries.	Trade with the United States.	Total trade.
1909	₱87,772,324	₱29,905,556	₱117,677,880
1910	94,387,348	59,183,832	153,571,180
1911	105,959,292	73,265,410	179,224,702
1912	126,959,188	82,780,444	209,739,632
1913	128,786,684	91,235,034	220,021,718

Business upon which internal-revenue percentage tax is levied.

Fiscal year.	Amount of business.
1909	₱380,408,894
1910	457,610,200
1911	533,650,738
1912	574,168,706
1913	671,685,704

The foreign trade of the islands has increased in a period of four years nearly nine-tenths, while the domestic business, for which figures are here given, and which is the best index now available of the movement of commercial prosperity in the country at large, increased by nearly four-fifths. A small portion of this latter increase was due to improved methods of collection.

The favorable state of affairs which had been noticeable up to the end of the last fiscal year in regard to the customs receipts, in spite of the effect of the tariff of 1909 establishing free trade with the United States, ceased to exist during the year just past. The amount and causes of the decrease in this item of revenue are referred to in the report of the Governor General.

FINANCES.

For a statement of the financial condition of the government attention is respectfully invited to the report of the auditor for the Philippine Islands, where all details may be found.

RECOMMENDATIONS.

We wish to renew the recommendations for legislation by Congress appearing on pages 11 to 13 of the report of the Commission for the fiscal year ending June 30, 1912.

A number of other matters which come within the scope of the Commission's labors, or have been brought to its attention from time to time, are also treated of in the report of the Governor General, to which the Commission respectfully invites attention.

Respectfully submitted.

NEWTON W. GILBERT.
GREGORIA ARANETA.
RAFAEL PALMA.
JUAN SUMULONG.
FRANK A. BRANAGAN.

To the honorable the SECRETARY OF WAR,
Washington, D. C.

REPORT OF THE GOVERNOR OF PORTO RICO.

GOVERNMENT HOUSE,
San Juan, Porto Rico, September 2, 1913.

SIR: In pursuance of law I have the honor to present the following report of the Governor of Porto Rico covering the fiscal year ending June 30, 1913:

INTRODUCTION.

This period has been one of continued progress and marked development in all of the activities of the territory; every industry has yielded a greater product than ever before in the history of the island; willing labor has been closely employed under improving conditions; and legislation of vital importance to the advancement of the people as a whole has been enacted.

Reviewing in brief the year's record of achievements and transactions, the following features of principal interest are found:

In external commerce the quantity of exports and shipments of all products was notably increased, and, except in the case of sugar, returns therefrom were considerably larger than during any previous year. While the shipments of sugar were nearly 16,000 tons greater than during the preceding year, reaching a total of 383,000 tons, the average price received having been $16 less per ton, reduced the total value of sugar shipments for the greater quantity approximately $5,000,000 from that of last year. This reduction in the value of sugar shipments offset in the general trade values the increases in the returns from other products of approximately an equal amount and left the value of all exports and shipments substantially the same as that of last year, $49,000,000. The lower price of sugar is, however, most significantly reflected in the curtailment of imports and purchases in the United States which from the enforced economies resulting from loss of profit on sugar were reduced by $6,000,000 and amounted to but $37,000,000 instead of $43,000,000 during the preceding year. Thus, the total external trade value of the year, while

representing a general increase in the quantity of products, was reduced approximately $6,000,000 and amounted in all to $86,000,000. The reduction in the value of trade having been almost entirely on the side of purchases, increased the balance of trade in favor of the island to over $12,000,000, nearly twice as much as ever before shown on that side of the trade ledger. The notation of this result, however, would be more gratifying if the result had been produced by an increase in the value of products sold instead of a decrease in the value of purchases made.

Eighty-six per cent of the external commerce of the island was carried on with the United States, representing a trade valued at $74,000,000, while the remainder of the external trade, amounting in value to approximately $12,000,000, was distributed among foreign countries, Cuba being the largest participant, to the value of $3,800,000. Of the external purchases 90 per cent were made in the mainland markets of the United States, representing an expenditure therein of over $33,000,000, principally for manufactured articles. In exchange for this the mainland markets received from Porto Rico $40,000,000 worth of merchandise, consisting almost exclusively of raw products, and all of which would necessarily have been imported from foreign countries had it not gone from this territory. Thus Porto Rico has maintained its position as one of the largest and most valuable world's customers of the United States, which it has become since 1901 when free trade with the mainland was extended to the island and since which, and principally as a result thereof, its commercial and industrial activities have been increased fivefold.

Internal business, while developing in every line, has naturally been affected by the depression in the sugar industry, which furnishes more than half the value to the total production of the island. The fear of disastrous results to that industry through adverse tariff legislation and the possible consequent effects upon other lines of business interwoven therewith has caused the controlling factors in the local business field to assume a conservative and waiting position, which has prevented the inauguration of many private business enterprises, developments, and improvements that would otherwise have added their momentum to the industrial progress of the island. But the situation has demonstrated the soundness of actual business conditions at bottom, for while a few overcredited and improvidently managed enterprises have suffered reverses, business generally has sustained the strain with little permanent loss and has perhaps gained some advantages that will more than offset any bad effects that may temporarily accrue.

The condition of the recognized banking institutions of the Territory, as shown by a consolidation of their statements June 30 last, reflects the confidence of the public in those institutions as well as the conservative attitude of the local financiers charged with their management and the sound position of the banks. The deposits of these institutions, which have been more than doubled since 1908, show a healthy increase during the past year of 17 per cent, and at the end of that period aggregated twelve and a half million dollars, while the average cash reserve amounted to more than 40 per cent of all deposits held.

During this fiscal year 28 new domestic corporations with a paid-in capital of $241,825 and 15 foreign corporations were officially registered and authorized to transact business of various kinds.

Increasing attention has been given to the development of agriculture, for which purpose the insular board of commissioners of agriculture has cooperated with the agencies of the Federal Government and private enterprises in disseminating understandable information as to the most effective means to be adopted and methods to be followed in working out the various problems of cultivation, preservation, treatment, and marketing of crops under local conditions. And it is most gratifying to be able to report that the results of this work, which has been industriously pursued with the legislative support required during recent years, are already noticeable throughout the island. both in the increased acreage under tillage and thoroughness of cultivation, as well as in the better quality and greater quantity of the products resulting therefrom.

Only a start has as yet been made in the direction of scientific agriculture, but in view of the general purposes of the American Government in this island and the rich soil, favorable climate, and dense population of Porto Rico, one of the most important objects to be sought is the development of intensive farming in which the rural inhabitants shall generally acquire proprietary interests and thus participating in the activities, prosperity, and obligations of the country break away from the condition of peonage, in which through ancient system and tradition they have been held for centuries, and become independent citizens interested in their own and the public welfare. To these ends and for the general advancement of the masses of the people of the island has been devoted much of the legislation enacted by the local legislature during recent years, and especially by the regular and special sessions of 1913.

During these sessions the revenues of the island were increased substantially 50 per cent for the extension of practical education and the construction and maintenance of roads. Means were provided whereby municipal governments may procure at a low rate of interest, through the insular treasury, the necessary funds to carry out the public works required for the health and convenience of the people and under which no less than 30 projects of this kind, including waterworks, lighting plants, markets, and hospitals, involving an expenditure of approximately $2,000,000, are already under way. The completion and operation of the irrigation system, under which at least 35,000 acres of land will be brought into regular and largely increased cultivation, was provided for.

Legislation for the protection and regulation of labor and the improvement of labor conditions, in harmony with the most advanced thought upon that subject, but sound in principle, was enacted. An adequate weights-and-measures law that will relieve the people of an iniquitous tax of not less than 10 per cent on the value of everything they buy to eat and wear, was passed; and the act of the recent special session authorizing the establishment of an agricultural and industrial bank (bank of basic credits), with especial reference to the accommodation of small borrowers, and providing for sufficient intervention therein by the Government to insure its carrying out the general purposes for which it was authorized, should prove of great assistance and far-reaching benefit, not only in the upbuilding of the

industries of the country, but in developing among the masses of the people that class of moderate property owners who are a dependable support of free institutions.

The legislation of greatest importance enacted during the year, however, is that which provides for a further and substantial increase in educational facilities. The American public-school system has been developed and extended as rapidly as the revenues permitted, with due regard to efficiency in other necessary branches of the public service. Each year the budgets have been constructed with a view to an increase in the allotment for schools, until, at the end of 1912, it became necessary to call a halt or increase the revenues. To this situation, the legislature promptly responded at the regular session of 1913, and by a well-distributed increase of taxation provided the necessary revenues to enable the greatest advance ever made in one year in the educational activities of the island, increasing the appropriations for that purpose more than $1,000,000, to a total of $3,014,740; and when this appropriation, which is exclusively for public schools, is compared with the total allotments for education in Porto Rico, including subventions to private schools during the last year of Spanish sovereignty, which amounted to but $185,866.45, some idea may be gained of the advance made in reducing illiteracy and educating the youth of the country during the intervening 15 years since American occupation.

In 1898, after four centuries of civilized government, there was but one building in the island especially erected for school purposes; the total enrollment in the public schools was but 26,000; 80 per cent of the entire population, 80 per cent of the children of school age and 73 per cent of the males of voting age (over 21 years) were illiterate, unable to read or write. A million souls with this high percentage of illiteracy were domiciled within 3,600 square miles, or approximately 300 to the square mile, a population more dense than that of any part of the United States except a few manufacturing districts.

The ownership of the land had been distributed by large grants among comparatively few persons, who almost without exception neglected its development and left its utilization to the loose husbandry of inefficient *mayordomos* (foremen). As a result of this system the great mass of the people were ambitionless and homeless squatters, a large percentage of whom were so affected with *uncinariasis* (hookworm disease) as to reduce their labor efficiency at least 50 per cent, and all were dependent upon the landowners or their agents for the little labor they were able to perform, and in return for which they received barely enough to sustain an indescribably wretched existence. Thus, there were here a great body of patient, lovable people whose rights as human beings had been so long forgotten that they themselves had lost all knowledge that such rights existed, becoming gradually weaker with the passing of years and slowly perishing through neglect. These conditions among the masses of the people, and an intense political agitation for immediate self-government on the part of some of the political elements composed of a few hundred or thousand high-spirited, acutely intelligent and sentimental people, but whose education from the nature of the schools open to them and their observations of government as it had existed in Porto Rico, did not give them at that time any true com-

prehension of the requirements of popular government or of the practical, nonpartisan services due from the government, under the circumstances of the situation, to the masses of the people, in order to raise their condition to a level where they could themselves become the supreme power, where the principal factors that made difficult the problem which the American Government was called upon to face in initiating and prosecuting the work of converting this community into a well-conditioned, self-supporting, and self-governing body politic.

Naturally the remedies that immediately occurred to those charged with this humane and important duty were the improvement of health conditions and the extension of education. The former was more difficult than the latter, for it involved the discovery of the disease (then unknown) that was sapping the vitality and energies of the people. This task was at once undertaken, and at the same time the educational work was commenced and vigorously prosecuted. A new system of taxation in harmony with that obtaining in the United States was established. Then came free trade with the mainland, followed by a steady and phenomenal increase in the commerce and industries of the island, which in turn advanced property values and resulted in growing revenues from which the school appropriations were annually increased from $203,373 in 1899 to $3,000,000 for the current fiscal year. The start has been slow because the load was great, but it has been made.

The people have responded magnificently to their opportunities and the inspiration of educational advancement is obvious throughout the island. Fourteen million dollars have been wisely expended for educational purposes since civil government was established in 1900. Instead of one school house, erected for that purpose, as was the case in 1899, the people of Porto Rico own to-day 105 graded school buildings, many of which are of fine construction and compare favorably with the better class of school buildings in the cities of the United States, and 264 rural school buildings distributed throughout the country districts of the island, while 1,180 separate schools are maintained and 1,972 teachers employed in the service. The public-school enrollment has been increased from 26,000 to 161,785. The percentage of illiteracy in the whole population has been reduced from 80 per cent to 66 per cent, and of all persons between 10 and 20 years of age, to 53. A considerable reduction in illiteracy among persons over 21 years of age has been accomplished by public night schools, which are eagerly sought and have been maintained wherever possible.

Thus appreciable progress has been made in driving the shadow of ignorance from the island, and as the cloud lifts the development of the people in efficiency and independence should each year become easier and more rapid until they shall be able to secure to themselves the individual liberty that awaits them, and assume with confidence their full obligations as citizens. The work of directing the youth of this country, through education, to a higher plane of living and citizenship in harmony with modern civilization and correct ethical principles, and of superintending the general educational activities of the island, which should exert an uplifting influence in the cause of humanity far beyond its shores, is one to which should be devoted

a patriotic spirit, inexhaustible patience, genuine sympathy, and a broad and practical intelligence.

It was only after long study and numerous searching investigations during the early years of American occupation that the cause of the general debility among the people was discovered, and when it was found it became known through the efforts of Maj. Bailey K. Ashford, surgeon, United States Army, in 1900 for the first time, that the disease now commonly called hookworm (uncinariasis) was present in the Western Hemisphere and making havoc with the health of the people of Porto Rico. It has since been found prevalent in the Southern States on the continent and is now the subject of a general campaign of eradication with governmental and philanthropical aid. This is a disease easily and with little expense curable by means of a specific remedy, the principal difficulty being to get those affected to follow the treatment, and, in Porto Rico, to reach with the treatment the dense population in remote mountain districts, where it is most prevalent.

Since it was first discovered, when it was estimated that there were at least 300,000 cases in the island, it has been constantly combated with all the resources available, and no less than 190,000 cases have been treated, from which approximately 60,000 complete cures have been effected and many others started on the road to recovery. This is a great work, now being conducted in Porto Rico by an efficient insular government sanitary service that is prosecuting the campaign with the aid of a highly expert institute of tropical medicine as rapidly as funds will permit.

It is so important to the advancement of the people in every direction and could be carried forward so much more rapidly with adequate funds as to deserve consideration by Congress, with a view to a possible appropriation, with the aid of which the disease might be stamped out within two or three years, whereas at the present rate of treatment it must take a decade or more, during which time thousands of lives will be sacrified to the delay and industry suffer from lack of energy. However, steady, if somewhat slow, progress has been and is being made in improving the general health and sanitary conditions of the territory, as is shown by the decrease in the death rate of 1.67 per thousand during the last year to 22.35 per thousand inhabitants, of which 9.73 per thousand of the people represent children under 5 years of age, leaving a death rate of those over that age at the remarkably low average for the Tropics of 12.62 per thousand of the population during 1912–13.

External Commerce.

The value of exports and imports during the fiscal year 1912–13 aggregated $86,003,627, or a decrease of $6,628,259 from the corresponding total of the previous year. Imports were valued at $36,900,062 and exports $49,103,565, a decrease in the value of the former of $6,026,411 and of the latter of $601,848. The decrease in the value of imports is made up of a decrease of $4,269,540 in purchases from the United States and of $1,756,871 in purchases from other countries. The decrease of $2,334,778 in the value of exports to the United States is partially offset by an increase of $1,732,930 in exports to other countries. The drop in the price of sugar was respon-

sible for the decrease in the total value of shipments to the United States; at the same time larger exportations of coffee and favorable prices therefor, as well as increases in the amount received for other products of less importance shipped to European markets, resulted in a good showing in the value of shipments to countries other than the United States.

The following tables indicate the relative values and quantities of imports and exports during 1913 and previous years:

TABLE No. 1.—*Merchandise shipped from Porto Rico to the United States and foreign countries.*

Years.	To the United States.	To foreign countries.	Total.
1901	$5,581,288	$3,002,679	$8,583,967
1902	8,378,766	4,055,190	12,433,956
1903	11,051,195	4,037,884	15,089,079
1904	11,722,826	4,543,077	16,265,903
1905	15,633,145	3,076,420	18,709,565
1906	19,142,461	4,115,069	23,257,530
1907	22,070,133	4,926,167	26,996,300
1908	25,891,281	4,753,209	30,644,490
1909	26,394,312	3,996,913	30,391,225
1910	32,095,645	5,864,574	37,960,219
1911	34,765,409	5,152,958	39,918,367
1912	42,873,401	6,832,012	49,705,413
1913	40,538,623	8,564,942	49,103,565

TABLE No. 2.—*Merchandise shipped into Porto Rico from the United States and foreign countries.*

Years.	From the United States.	From foreign countries.	Total.
1901	$6,965,408	$1,952,728	$8,918,136
1902	10,882,653	2,326,957	13,209,610
1903	12,245,845	2,203,441	14,449,286
1904	11,210,069	1,958,960	13,169,029
1905	13,974,070	2,562,189	16,536,259
1906	19,224,881	2,602,784	21,827,665
1907	25,686,285	3,580,887	29,267,172
1908	22,677,376	3,148,289	25,825,665
1909	23,618,545	2,925,781	26,544,326
1910	27,097,654	3,537,201	30,634,855
1911	34,671,958	4,115,039	38,786,997
1912	37,424,545	5,501,928	42,926,473
1913	33,155,005	3,745,057	36,900,062

TABLE No. 3.—*Merchandise shipped into and from Porto Rico in trade with United States.*

Years.	Imports.	Exports.	Total trade with United States.
1901	$6,965,408	$5,581,288	$12,546,696
1902	10,882,653	8,378,766	19,261,419
1903	12,245,845	11,051,195	23,297,040
1904	11,210,069	11,722,826	22,932,895
1905	13,974,070	15,633,145	29,607,215
1906	19,224,881	19,142,461	38,367,342
1907	25,686,285	22,070,133	47,756,418
1908	22,677,376	25,891,281	48,568,657
1909	23,618,545	26,394,312	50,012,857
1910	27,097,654	32,095,645	59,193,299
1911	34,671,958	34,765,409	69,437,367
1912	37,424,545	42,873,401	80,297,946
1913	33,155,005	40,538,623	73,693,628

TABLE No. 4.—*Merchandise shipped into and from Porto Rico in trade with foreign countries.*

Years.	Imports.	Exports.	Total foreign trade.
1901	$1,952,728	$3,002,679	$4,955,407
1902	2,326,957	4,055,190	6,382,147
1903	2,203,441	4,037,884	6,241,325
1904	1,958,960	4,543,077	6,502,037
1905	2,562,189	3,076,420	5,638,609
1906	2,602,784	4,115,069	6,717,853
1907	3,580,887	4,926,167	8,507,054
1908	3,148,289	4,753,209	7,901,498
1909	2,925,781	3,996,913	6,922,694
1910	3,537,201	5,864,574	9,401,775
1911	4,115,039	5,152,958	9,267,997
1912	5,501,928	6,832,012	12,333,940
1913	3,745,057	8,564,942	12,309,999

TABLE No. 5.—*Statement showing annual trade balance resulting from the commerce between Porto Rican and other ports.*

Fiscal year.	Imports.	Exports.	Balance.	
			In favor of the island.	Against the island.
1901	$8,918,136	$8,583,967	.....	$334,169
1902	13,209,610	12,433,956	.....	775,654
1903	14,449,286	15,089,079	$639,793	.....
1904	13,169,029	16,265,903	3,096,874	.....
1905	16,536,259	18,709,565	2,173,306	.....
1906	21,827,665	23,257,530	1,429,865	.....
1907	29,267,172	26,996,300	.....	2,270,872
1908	25,825,665	30,644,490	4,818,825	.....
1909	26,544,326	30,391,225	3,846,899	.....
1910	30,634,855	37,960,219	7,325,364	.....
1911	38,786,997	39,918,367	1,131,370	.....
1912	42,926,473	49,705,413	6,778,940	.....
1913	36,900,062	49,103,565	12,203,503	.....

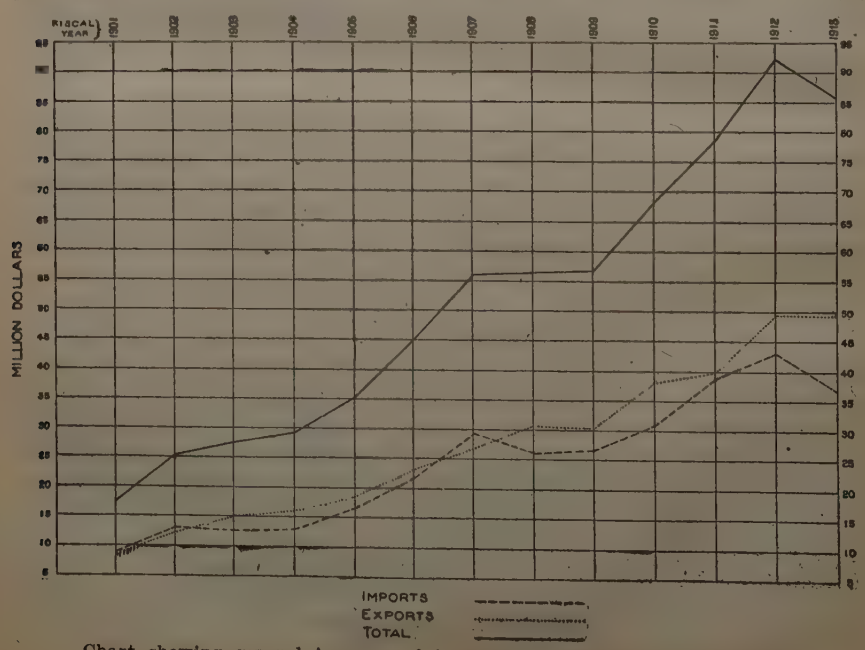

Chart showing general increase of imports and exports and total trade.

Among the principal classes of imports during the past year were breadstuffs from the United States invoiced at $7,655,353, comprising receipts of rice valued at $5,069,527 and of flour invoiced at $1,786,589. Cereal products to the value of $110,426 were received from other countries. Importations of cotton goods aggregated in value $3,933,540; manufactures of iron and steel were invoiced at $3,173,025; meats and meat products imported are represented by a value of $3,283,993, mostly from the United States; dairy products from the United States were invoiced at $288,465 and from other countries at $417,916. Importations of leather goods are represented by a value of $1,472,028. The importations of the year indicate no change so far as the nature of the commodities is concerned from that of previous years, but in quantity and value there appears to have been a decrease in nearly all classes except food supplies and other articles of prime necessity.

TABLE No. 6.—*Merchandise brought into Porto Rico from the United States and foreign countries during the fiscal year ending June 30, 1913.*

Articles.	Domestic merchandise from United States.		Merchandise imported from foreign countries.	
	Quantity.	Value.	Quantity.	Value.
Agricultural implements		$19,608		
Animals		80,965		$1,091
Breadstuffs:				
Bread and biscuits, pounds	4,062,161	314,790		18,030
Corn meal, barrels	51,580	177,873		
Oats, bushels	422,692	191,893		
Wheat flour, do	355,134	1,786,589		
Rice, pounds	128,748,080	5,069,527	57,550	2,289
All other		114,681		90,107
Candles, pounds	1,046,104	89,678		1,650
Cars, carriages, and parts of		773,589		
Cement, barrels	378,862	480,387	555	1,224
Chemicals, drugs, dyes, and medicines		496,507		117,283
Coal and coke, tons	99,132	302,656		
Cocoa and chocolate, prepared, pounds		35,135		81,127
Cotton, manufactures of:				
Cloths, yards	32,684,795	1,808,895	378,387	68,590
All other manufactures of		2,012,640		43,415
Earthen, stone, and china ware		92,563		10,837
Explosives		28,405		43
Fertilizer, tons	14,028	667,381	4,808	211,481
Fibers, vegetable, and textile grasses:				
Cordage, pounds	748,805	61,894	29,580	6,171
Jute bags		42,191		306,014
All other		94,161		35,045
Fish:				
Dried, smoked, or cured, pounds	8,491,627	432,129	11,405,220	680,564
All other		103,073		75,368
Fruits and nuts		157,742		42,602
Glass and glassware		118,556		24,690
India rubber, manufactures of		397,638		1,684
Instruments and apparatus, scientific		36,641		
Iron and steel, manufactures of		2,939,442		233,583
Leather, tanned skins, and manufactures of		1,441,605		30,423
Meat and dairy products:				
Meat products—				
Bacon, pounds	247,538	36,046		
Hams and shoulders, cured, do	3,229,230	490,975	9,142	2,563
Pork, pickled, do	11,728,943	1,253,711		
Lard, do	2,012,773	385,358	106	19
Lard compounds, do	8,668,394	769,521		
All other meat products		275,636		70,164
Dairy products—				
Butter, pounds	243,112	62,803	290,953	109,189
Cheese, do	395,947	72,029	1,915,581	236,534
Condensed milk, do	2,194,404	153,633	1,192,446	72,193
Musical instruments, and parts of		61,624		7,286

TABLE No. 6.—*Merchandise brought into Porto Rico from the United States and foreign countries during the fiscal year ending June 30, 1913*—Continued.

Articles.	Domestic merchandise from United States.		Merchandise imported from foreign countries.	
	Quantity.	Value.	Quantity.	Value.
Oils:				
Animal.....gallons..	55	$43	469	$294
Mineral.....do....	4,482,098	660,028	2,832,939	66,802
Vegetable.....	.....	93,592	.....	126,244
Paints, pigments, and varnishes.....	.....	154,547	.....	28,129
Paper, manufactures of.....	.....	554,014	.....	103,356
Perfumeries, cosmetics, and toilet preparations.....	.....	58,690	.....	41,388
Seeds.....	.....	3,062	.....	1,115
Silk, manufactures of.....	.....	272,124	.....	10,789
Soap:				
Toilet or fancy.....	.....	37,659	.....	1,387
All other.....pounds..	12,912,824	540,928	1,915	125
Spirits, wines, and malt liquors:				
Champagne.....dozen quarts..	.....	.....	997	19,525
Malt liquors.....gallons..	456,100	227,733	27,209	20,596
Spirits, distilled.....do....	3,250	10,292	12,381	38,644
Wines.....do....	171,240	67,315	95,579	86,800
Sugar, refined.....pounds..	13,443,894	636,012	.....	.....
Straw and palm leaf, manufactures of.....	.....	57,025	.....	752
Tobacco, and manufactures of:				
Unmanufactured.....pounds..	2,337,501	373,975	6	4
All other manufactures of.....	.....	40,209	.....	239
Toys.....	.....	48,423	.....	3,602
Vegetables:				
Beans and dried peas.....bushels..	199,833	534,965	9,742	21,885
Onions.....do....	19,333	20,663	48,765	43,227
Potatoes.....do....	180,033	167,977	33,576	32,695
All other, canned.....	.....	46,960	.....	16,518
All other (including pickles and sauces).....	.....	16,540	.....	95,418
Wood, and manufactures of:				
Boards, deals, planks, and scantlings.....M feet..	45,301	969,486	3,384	63,662
Furniture.....	.....	370,937	.....	12,404
All other.....	.....	663,023	.....	19,913
Wool, manufactures of.....	.....	191,996	.....	5,833
All other articles.....	.....	1,514,803	.....	300,452
Total value.....	.....	32,223,191	.....	3,745,057
Foreign merchandise imported into Porto Rico through the United States (details not given).....	.....	.....	.....	1,603,064
Foreign merchandise imported into Porto Rico direct from foreign countries (details not given).....	.....	.....	.....	2,141,993
Total value of foreign merchandise, duty paid in Porto Rico.....	.....	.....	.....	3,745,057
oreign merchandise purchased in or shipped through the United States.....	.....	.....	.....	931,814
Total value of foreign merchandise brought into Porto Rico.....	.....	.....	.....	4,676,871

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TABLE No. 7.—*Domestic and foreign merchandise shipped from Porto Rico to the United States and foreign countries during the fiscal year ending June 30, 1913.*

Articles.	Domestic merchandise shipped to the United States.		Domestic merchandise exported to foreign countries.	
	Quantity.	Value.	Quantity.	Value.
Cocoa ..... pounds	1,632	$275	123,932	$22,554
Coffee ..... do	773,626	132,970	49,000,571	8,378,346
Cotton, sea-island ..... do	192,581	57,374	16,260	4,801
Fruits and nuts:				
Oranges ..... boxes	353,633	740,010	57	81
Pineapples ..... crates	360,232	1,142,007	56	189
Grapefruit ..... boxes	216,216	726,687	31	124
Prepared or preserved—				
Pineapples ..... do	52,144	147,564	.....	.....
Coconuts ..... M	10,797	348,619	107	3,771
Hides and skins, other than furs	771,508	148,749	3,596	600
Honey	.....	59,721	.....	9,514
Leather, sole ..... pounds	88,176	18,726	4,232	1,150
Seeds:				
Cotton ..... do	.....	.....	457,163	8,222
Annatto ..... do	213,225	10,468	.....	.....
Spirits, distilled:				
Alcohol ..... gallons	3,041	988	33,544	9,133
Rum ..... do	.....	.....	43	56
Straw hats	.....	215,163	.....	3,269
Sugar ..... tons	382,700	26,619,158	.....	.....
Molasses ..... gallons	11,150,572	607,747	.....	.....
Tobacco and manufactures of:				
Unmanufactured—				
Leaf ..... pounds	6,952,467	3,006,854	71,099	8,987
Scrap ..... do	1,196,998	141,234	316,212	31,152
Manufactures of—				
Cigars ..... M	165,524	5,800,162	44	524
Cigarettes ..... M	8,442	23,323	15	21
Tallow ..... pounds	72,887	4,391	234,211	13,397
All other domestic articles	.....	577,475	.....	53,560
Total exports of domestic merchandise	.....	40,529,665	.....	8,549,451
Total exports of foreign merchandise	.....	8,958	.....	15,491
Total exports of domestic and foreign merchandise	.....	40,538,623	.....	8,564,942

The exportation of sugar, the principal product, amounting to 382,700 tons, represents an increase in quantity of nearly 16,000 tons, but its total value, $26,619,158, is $4,900,000 less than the value of similar shipments of 1912.

TABLE No. 8.—*Sugar exports.*

Fiscal year.	Tons.	Value.	Average price per ton.
1901	68,909	$4,715,611	$68.43
1902	91,912	5,890,302	64.08
1903	113,108	7,470,122	66.04
1904	129,647	8,690,814	67.03
1905	135,663	11,925,804	87.90
1906	205,277	14,184,667	69.10
1907	204,079	14,770,682	72.37
1908	234,607	18,690,504	76.52
1909	244,257	18,432,446	75.46
1910	284,522	23,545,922	82.75
1911	322,919	24,479,346	75.81
1912	367,145	31,544,063	85.92
1913	382,700	26,619,158	69.55

* * * * * * *

The exportation of unmanufactured tobacco increased to 8,536,776 pounds (63 per cent), valued at $3,188,227. There was a decrease in the number of cigars exported, but their better quality resulted in an increase of the total value of these shipments. The total output of cigars amounted in number to 284,806,812, of which 119,038,300 were consumed in the island and 165,768,512 were withdrawn from bond for exportation. The total output of cigarettes, 473,768,810, was much above the average of previous years but slightly less than the number manufactured during 1912. The local trade consumed 464,861,210 and 8,907,600 were exported from the island.

TABLE No. 9.—*Cigars.*

Fiscal year.	Withdrawn for consumption.	Withdrawn for export.	Total output.
1907	74,698,430	132,669,823	207,368,253
1908	76,983,830	103,781,719	180,765,549
1909	84,933,260	140,302,271	225,235,531
1910	92,700,160	151,724,438	244,424,598
1911	101,064,495	174,743,098	275,807,593
1912	111,682,615	169,765,656	281,448,271
1913	119,038,300	[1] 165,768,512	284,806,812

[1] Treasury figures.

TABLE No. 10.—*Cigarettes.*

Fscal year.	Withdrawn for consumption.	Withdrawn for export.	Total output.
1907	347,722,000	10,460,000	358,182,000
1908	354,407,900	11,232,424	365,640,324
1909	365,525,500	11,244,500	376,770,000
1910	393,844,300	13,142,000	406,986,300
1911	459,710,045	11,760,000	471,470,045
1912	532,431,000	[1] 11,293,350	[1] 543,724,350
1913	464,861,210	[1] 8,907,600	[1] 473,768,810

[1] Treasury figures.

TABLE No. 11.—*Tobacco leaf and scrap exported.*

Fiscal year.	Pounds.	Value.
1907	4,344,659	$1,232,058
1908	8,402,286	1,996,055
1909	4,539,320	1,250,237
1910	4,176,172	1,258,317
1911	4,450,012	1,554,783
1912	5,456,751	2,320,130
1913	8,536,776	3,188,227

Not only did the coffee crop exceed all previous records, but the unusually large exportation of that product, aggregating 49,774,197 pounds, was invoiced at $8,511,316, indicating a higher average price than ever before received.

* * * * * * *

CHART SHOWING INCREASE IN THE VALUE OF THE THREE PRINCIPAL PRODUCTS EXPORTED FROM PORTO RICO NAMELY SUGAR CIGARS AND COFFEE FROM 1901 TO 1913.

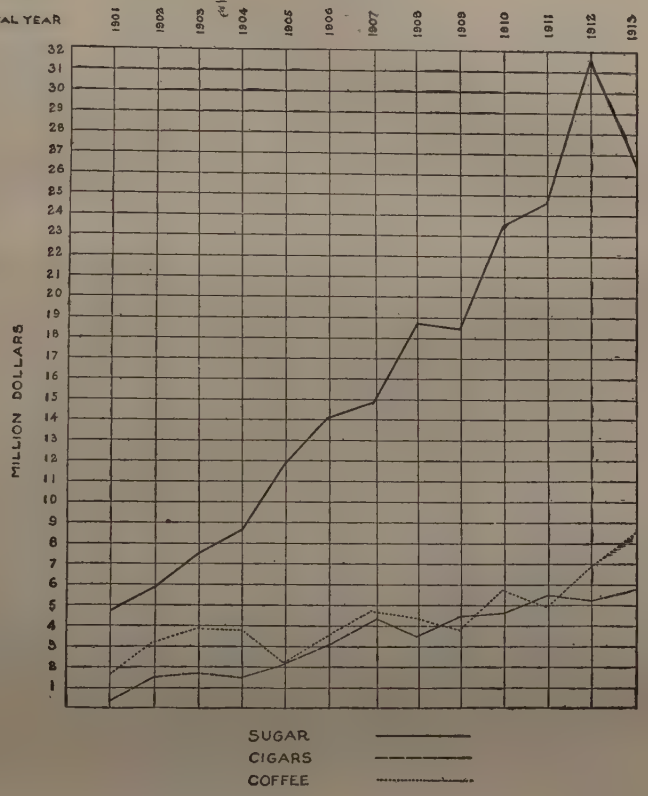

TABLE No. 12.—*Coffee exports.*

Fiscal year.	Pounds.	Value.	Average price.
1901	12,157,240	$1,678,765	$0.137
1902	26,906,399	3,195,662	.118
1903	35,207,139	3,970,574	.112
1904	34,329,972	3,903,257	.113
1905	16,849,739	2,141,009	.127
1906	28,290,322	3,481,102	.123
1907	38,756,750	4,693,004	.121
1908	35,256,489	4,304,609	.122
1909	28,489,236	3,715,744	.130
1910	45,209,792	5,669,602	.125
1911	33,937,021	4,992,779	.147
1912	40,146,365	6,754,913	.168
1913	49,774,197	8,511,316	.171

There was a material increase in the value of shipments of the various kinds of fruits—pineapples, from $684,774 to $1,142,343; oranges, from $584,414 to $740,091; and grapefruit, from $525,048 to $726,811—the total value of all fruit shipments during 1912–13 being $3,120,919, an increase of $743,157 over the preceding year.

TABLE No. 13.—*Value of fruit exports.*

Fiscal year.	Oranges.	Pine-apples.	Canned pine-apples.	Coco-nuts.	Grape-fruit.	Other fruits.	Total.
1901	$84,475	(1)	(1)	$8,334	(1)	$16,992	$109,801
1902	51,364	(1)	(1)	12,720	(1)	9,898	73,982
1903	230,821	(1)	(1)	326	(1)	61,956	293,103
1904	352,646	(1)	(1)	(1)	(1)	81,214	433,860
1905	125,422	(1)	(1)	(1)	(1)	130,478	255,900
1906	295,633	$27,826	$42,186	129,793	(1)	7,420	502,858
1907	469,312	64,831	63,519	174,957	$7,586	3,737	783,942
1908	630,720	172,779	98,203	206,704	44,535	11,320	1,164,261
1909	401,912	442,780	117,830	204,498	76,310	18,154	1,261,484
1910	582,716	555,044	106,587	218,870	162,749	9,851	1,635,817
1911	703,969	641,291	149,744	258,168	309,698	11,123	2,073,993
1912	584,414	684,774	258,671	308,883	525,048	15,972	2,377,762
1913	740,091	1,142,348	147,564	353,690	726,811	10,415	3,120,919

[1] Shipments included under "Other fruits."

CHART SHOWING INCREASE IN THE VALUE OF ORANGES, PINEAPPLES COCOANUTS AND GRAPE FRUIT EXPORTED FROM PORTO RICO FROM 1901 TO 1913

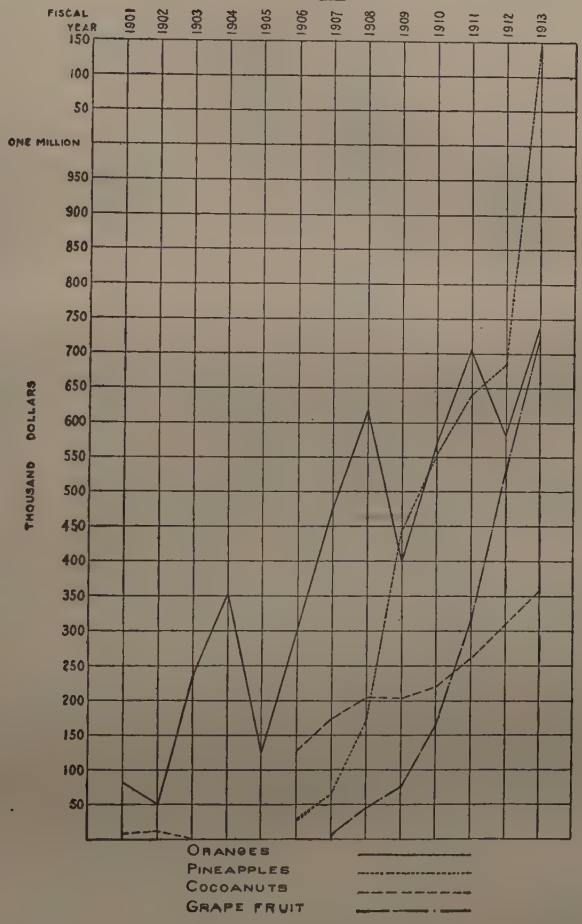

TABLE NO. 14.—*Statement by countries of value of merchandise brought into Porto Rico from the United States and foreign countries for the five years ending June 30, 1913.*

Countries.	Shipped into Porto Rico.				
	1909	1910	1911	1912	1913
United States	$23,618,545	$27,097,654	$34,671,958	$38,470,963	$33,155,005
Austria-Hungary	8,826	7,030	15,000	11,329	10,406
Belgium	55,406	97,340	99,949	87,507	142,571
Denmark	43,388	67,127	108,737	97,593	111,212
France	336,855	345,469	435,024	409,278	348,975
Germany	250,981	493,856	586,575	601,723	326,419
Italy	72,106	76,611	80,847	105,446	74,986
Netherlands	122,842	164,314	252,596	218,435	237,969
Norway	2,097	414		271	287
Portugal	1,055	993	1,896	1,920	692
Spain	585,792	708,573	791,293	843,120	761,082
Turkey	558				
Sweden			2,127	2,325	19,659
Switzerland	3,725	373	1,012	1,036	2,262
United Kingdom	332,087	366,241	423,809	490,579	368,107
Canada	536,260	555,729	609,381	699,731	639,178
Newfoundland	170,107	77,074	89,025	58,822	82,023
Panama	803	85	583	670	103
Mexico	26,674	13,226	2,924	93,489	61,804
Miquelon, Langley, etc		5,183			
West Indies:					
British	8,343	1,954		15,548	18,893
Cuba	42,360	56,511	43,815	63,460	64,262
Danish	3,754	12,128	1,753	3,048	4,632
Dutch	8,673	38,504	12,523	8,343	6,691
French			2,827		133
Haiti				60	11
Santo Domingo	13,156	41,396	52,508	68,920	16,857
Argentina	19,263	43,005	129,155	89,879	86,989
Brazil		765			
Colombia	3,656	3,248	6,579	3,625	6,720
Ecuador				3,123	366
Guiana—British	795		45		
Peru		172			
Uruguay	126,614	199,341	187,212	149,444	43,195
Venezuela	8,191	7,925	11,716	13,455	14,627
East Indies—British India	115,340	109,406	127,399	295,591	242,195
Japan	56	142	22		68
Canary Islands	21,018	43,066	38,707	64,158	49,183
Spanish Africa					2,500
Total	26,544,326	30,634,855	38,786,997	42,972,891	36,900,062

TABLE NO. 15.—*Statement by countries of value of merchandise shipped from Porto Rico to the United States and foreign countries for the past five years ending June 30, 1913.*

Countries.	Shipped from Porto Rico.				
	1909	1910	1911	1912	1913
United States	$26,394,312	$32,095,645	$34,765,409	$42,873,401	$40,538,623
Austria-Hungary	445,783	833,604	369,302	749,377	808,292
Belgium	10,934	12,662	1,380	6,711	5,155
Denmark	7,966	12,244	7,809		825
France	547,337	584,193	365,929	422,549	1,258,810
Germany	105,775	259,508	66,851	90,244	111,946
Gibraltar	23,639	8,736	8,528	16,203	24,718
Italy	401,826	377,517	319,653	481,092	605,956
Netherlands	36,154	94,990	16,480	41,064	58,836
Norway	586		1,336		3,272
Portugal			1,200		
Russia		1,200		3,114	
Roumania				9,390	1,275
Spain	780,871	1,058,197	887,037	1,281,178	1,651,613
Sweden	6,545	12,827	5,470	39,297	114,910
Switzerland				1,195	
United Kingdom	41,485	13,195	14,214	16,169	7,172

TABLE No. 15.—*Statement by countries of value of merchandise shipped from Porto Rico to the United States and foreign countries for the past five years ending June 30, 1913*—Continued.

Countries.	Shipped from Porto Rico.				
	1909	1910	1911	1912	1913
Canada	$19,191	$5,437	$40	$333	$145
Panama	249		1,225	410	
West Indies:					
British	460	396	4,395	1,134	377
Cuba	1,432,909	2,470,078	2,989,704	3,637,752	3,800,746
Danish	20,504	19,984	15,875	11,945	15,439
Dutch	7,685	3,939	6,616	7,067	18,249
French	592	569	231	223	554
Haiti	342	288	717	875	
Santo Domingo	96,900	88,347	60,254	61,081	27,845
Argentina	80		1,889		18,792
Colombia	3,209	347	1,284	424	3,250
Uruguay		747		860	2,049
Venezuela	734	586	300		553
Philippine Islands				9,230	
Canary Islands	1,987	1,811	100	2,925	17,415
French Africa	3,140	1,284	4,855	2,500	4,918
Spanish Africa			284	670	378
Morocco		1,888			
Finland					1,452
Total	30,391,225	37,960,219	39,918,367	49,705,413	49,103,565

TABLE No. 16.

Fiscal year.	Sugar.	Cigars.	Coffee.
1901	$4,715,611	$306,115	$1,678,765
1902	5,890,302	1,549,235	3,195,662
1903	7,470,122	1,753,795	3,970,574
1904	8,690,814	1,460,496	3,903,257
1905	11,925,804	2,152,051	2,141,009
1906	14,184,667	3,074,226	3,481,102
1907	14,770,682	4,241,410	4,693,004
1908	18,690,504	3,414,140	4,304,609
1909	18,432,446	4,383,893	3,715,744
1910	23,545,922	4,480,030	5,669,602
1911	24,479,346	5,355,223	4,992,779
1912	31,544,063	5,086,711	6,754,913
1913	26,619,158	5,800,686	8,511,316

TABLE No. 17.

Fiscal year.	Imports.	Exports.	Total.
1901	$8,918,136	$8,583,967	$17,502,103
1902	13,209,610	12,433,956	25,643,566
1903	14,449,286	15,089,079	29,538,365
1904	13,169,029	16,265,903	29,434,932
1905	16,536,259	18,709,565	35,245,824
1906	21,827,665	23,257,530	45,085,195
1907	29,267,172	26,996,300	56,263,472
1908	25,825,665	30,644,490	56,470,155
1909	26,544,326	30,391,225	56,935,551
1910	30,634,855	37,960,219	68,595,074
1911	38,786,997	39,918,367	78,705,364
1912	42,926,473	49,705,413	92,631,886
1913	36,900,062	49,103,565	86,003,627

Legislation.

The first session of the seventh legislative assembly convened January 13, 1913, and during the 60 days thereof 118 laws and 24 joint resolutions were passed. As recommended in the annual message to the legislature, special attention was devoted to revenue measures for the purpose of increasing the amount of funds available for education and public works. The revenue measures passed will, it is estimated, so increase the income of the government as to satisfactorily meet the additional financial responsibility imposed by the numerous acts which were also passed, providing for the construction of new roads, bridges, and public buildings, and for the extension of the educational system, especially in the form of agricultural and trade schools. Provision was made for the erection of seven district hospitals, an appropriation was made for continuing the campaign against tuberculosis, an act was passed reorganizing the Institute of Tropical Medicine, and several other laws enacted in the interest of health and sanitation. Amongst the other humanitarian legislation passed are several acts to improve the condition of inmates of charitable and correctional institutions, to insure the safety of scaffolding erected for the use of workmen, to protect women and children against dangerous occupations and limit their hours of labor, to provide a means for indemnifying injured workmen, to amend the law creating the bureau of labor, and to appoint a commission to prepare a bill for an employers' liability law.

In addition to these acts there were others to promote commerce and agriculture and other interests of the people of Porto Rico, and the legislature completed its work by passing the necessary bills to appropriate funds for the conduct of the government during the ensuing fiscal year. On June 20, 1913, the legislature was convened in special session for the purpose of modifying and completing the legislation necessary for the financing, completion, and operation of the irrigation project and the creation of an agricultural and industrial bank, two subjects that were not ready for treatment at the time of the regular session. In addition to measures satisfactorily disposing of these subjects other important laws were enacted, among them one providing for a consolidated bond issue based upon municipal and school-board bond issues, of loans to school boards and municipalities, acts involving necessary modifications in the revenue laws, an act to limit the hours of labor on public works, and a law establishing standard systems of weights and measures, prohibiting the use of other systems, and providing penalties for violations thereof and to prevent frauds in connection therewith.

* * * * * * *

Executive.

PARDONS AND PAROLES.

During the year 309 petitions for executive clemency were received from persons upon whom penalties had been imposed by the courts. Pardons were granted in 34 cases, and 24 prisoners were released under parole, or under conditions similar to parole. Civil rights were restored in four cases, and in one case a fine imposed was remitted. In addition to the sentences commuted upon petition, a

slight deduction in the term of sentence was made in 148 cases of prisoners who voluntarily performed heroic services under the direction of the health authorities during the epidemic of bubonic plague in July and August of 1912.

The number of petitions received and their treatment was as follows:

Application for clemency		309
Granted:		
Full pardons	34	
Fines remitted or reduced	1	
Civil rights restored	4	
Paroles and conditional pardons	24	
Sentences commuted	6	
		69
Denied after investigation		83
Filed without consideration on account of failure of petitioner to submit facts		114
		266
Pending		43

HEALTH AND SANITATION.

The sanitation service, reorganized in accordance with the provisions of the law of 1912, has been in existence for more than a year. Whereas its first efforts were met by considerable opposition from many persons who did not appreciate the necessity for some of the requirements imposed, the improvement in the organization and the increased efficiency of the personnel acquired through time and experience and the results accomplished, especially in the eradication of bubonic plague and several localized epidemics of typhoid fever, which the public could not fail to recognize as of vital importance to the communities affected, have won such confidence and respect that the ill feeling occasionally apparent at the beginning of the work has practically disappeared.

At the date of the last annual report the sanitation service was completing the fight against an epidemic of bubonic plague. The first suspected case of plague in a human being was reported on June 14, 1912, and the last human case was discovered September 15. On February 15, 1913, all evidence of plague infection having been absent for a sufficient length of time to indicate its eradication, emergency measures were discontinued and rat proofing and rat destruction were taken up as part of the routine sanitation work. That the type of the infection was severe is indicated by the death of 36 of the 55 persons taken sick, a death rate of 65 per cent, as compared with the rate of 50 per cent prevailing during the epidemic of 1907–8 in San Francisco. The known cost of the plague to Porto Rico was 36 lives and $227,000 expended for emergency measures; and to this must be added the amount expended by the Federal Government through the United States Public Health Service in its cooperation with the local health service, and the loss to commerce through the temporary interference with business. But to more than offset these items the island has a valuable asset in the insurance against future epidemics of bubonic plague that has resulted from the thorough and efficient rat and plague proofing work done by the local health service and by the United States Public Health Service, a work that is still being prosecuted by the insular sanitation service and that will be continued

until all of the cities of the island have been made as nearly rat and plague proof as possible.

An epidemic of typhoid fever appeared in Peñuelas, in which 10 per cent of the inhabitants of the town were taken sick. It was promptly overcome by the vaccination of the entire population and the adoption of thorough sanitation measures, including the furnishing of a clean in place of a polluted water supply, which appears to have been the source of the infection. Several other less important local epidemics of typhoid and other diseases occurring from time to time were as promptly overcome.

Few of the municipalities of the island at the time of the organization of the sanitation service were provided with proper water supplies and sewerage systems, but upon the insistence and recommendations of the health authorities a number of water systems have been installed, and others are in course of installation or have been projected, while sewerage systems are being planned and installed as fast as the funds, for which numerous municipalities have made application, are made available by means of municipal bond issues.

The popular conception of the functions of a sanitation service is the cleaning of streets and the removal of garbage. While this is one of the duties of the service in Porto Rico, its attention and operations are directed to many other points of contact with activities, public and private, so that as the organization of the service develops its functions become multitudinous. Its fundamental object is the control and prevention, as far as possible, of disease. To do this it must keep the inhabitants of the island, collectively and individually, so far as matters affecting public health are concerned, under constant observation, by means of complete records of marriages, births, diseases, deaths, and burials, and the constant vigilance of its health officers and inspectors. Each case of disease or death in the slightest degree suspicious is investigated, and upon the discovery of local conditions that require special treatment they are given attention.

The legislature in 1913 provided for the establishment of an institute for the study of tropical diseases, which, under the direction of an able board of physicians, and supplementary to the work of the sanitation service, makes a special study of the occurrence and treatment of maladies peculiar to the Tropics. The permanent members of this institution, Drs. W. F. Lippitt, Pedro Gutierrez Igaravidez, and Isaac Gonzales Martinez, collaborated with Maj. Bailey K. Ashford, United States Army, and Dr. W. B. King, United States Public Health Service, who have been detailed by their respective departments to assist in the development of this important scientific undertaking. Aside from the work indicated, the Institute of Tropical Medicine furnishes a valuable course of instruction to medical officers and inspectors of the sanitation service, as well as to other persons interested in tropical diseases and sanitation work.

The sanitation service, acting under regulations prescribed by the insular board of health, has accomplished much in the way of compelling compliance with sanitary rules in dwelling houses, schools, industrial establishments, hotels, restaurants, and other places where alimentary articles are prepared and sold.

The work of eradicating hookworm, although far from complete, is progressing as satisfactorily as could be expected with the funds avail-

able, 29,816 cases having been treated during the year, resulting in the complete cure of 10,583.

The most difficult problem confronting the health authorities at the present time is the prevalence of tuberculosis. The white plague is, in fact, more serious than was the bubonic plague, but its eradication is only a matter of convincing the people of the fact of its seriousness, training them to follow certain simple hygienic rules for its prevention, and the removal of causes of infection. The mortality rate from bubonic plague was 65 per cent, while the death rate from white plague in Porto Rico is approximately 100 per cent, but the eradication of the latter would be far less expensive in proportion to the number of persons afflicted than the expense of eradicating the former. The Anti-Tuberculosis League of Porto Rico, an organization maintained by private funds, commenced the educational campaign against this disease several years ago. It has been impossible for the organization with its limited resources to accomplish any practical results in the eradication of the disease, but by persistent and systematic effort has very gradually brought to the public a realization of its seriousness and convinced the people of the possibility of its successful treatment, with the result that the legislature first made small annual appropriations to assist the league and finally, in 1913, appropriated funds for the construction of seven hospitals to be devoted especially to the treatment of tuberculosis and anemia. It is hoped that the efforts of the league and the health authorities will result eventually in securing sufficient funds for the institution of a practical and effective campaign against the disease.

The activities of the sanitation service have brought about a notable improvement in sanitary conditions in all municipalities in the island, in streets, public and private buildings, markets, slaughterhouses, jails, hospitals, and charitable institutions.

An important feature of the health work in Porto Rico has been the mosquito-eradication service, inaugurated two years ago under the direction of Maj. Robert E. Noble, United States Army, of the Panama Canal Zone. Although this work, owing to limited funds, has not been conducted as thoroughly and vigorously as originally planned, it has resulted in a marked decrease in the number of mosquitoes in 85 per cent of the towns of the island and a material decrease in the number of cases of malaria in districts where formerly its prevalence was serious. An important reason for close attention to this work in Porto Rico is that mosquitoes that transmit malaria, elephantiasis, and yellow fever are found in nearly all parts of the island, and their eradication is of great importance in preventing the spread of the first two diseases and in preventing an epidemic of yellow fever, the introduction of which has thus far been prevented by the vigilance of the United States Public Health Service.

A competent corps of sanitary engineers has been of value in the inspection of buildings and the planning and inspection of public works of a sanitary nature. Its activities have embraced all public and private construction and undertakings in which the technical advice and supervision of sanitary engineers are required by law, regulations, or health considerations, even to the extent of furnishing, on application, plans for the installation of plumbing, latrines, septic tanks, the construction of dwelling houses, stables, dairies, etc.

The facilities and activities of the Government laboratories have been so extended as to enable them to make all the necessary examinations for the detection of transmissible diseases, impurities in water supplies, in milk and other foods.

The enforcement by the sanitation service of the provisions of the Federal pure food and drug law has resulted in the detection and seizure of many articles the distribution of which would have defrauded purchasers and constituted a menace to the health and life of the consumer.

Increased attention has been devoted to combating diseases among domestic animals, the most prevalent of which is glanders. This important work has been given so little attention in past years that as the investigations conducted by the veterinary inspectors progress they constantly bring to light more work to be performed. The practical control of these diseases is dependent only on time and the continuation of energetic measures, which are now being applied as rapidly as conditions permit.

The ultimate success of a sanitation service should be indicated by a decrease in the death rate. Although the present service has been in existence such a short time that comparatively little change in general conditions could as yet be expected as a result of its efforts, the record of the past year shows a lowering of 1.67 per 1,000 in the mortality rate, this notwithstanding an outbreak of bubonic plague and several localized epidemics of less serious diseases. There were 41,002 births and 26,034 deaths recorded during the year, an excess of 14,968 in births over deaths during 1912–13, and an excess of 1,128 births over the number recorded during the previous year. Marriages recorded numbered 16,400.

INSULAR BOARD OF HEALTH.

The insular board of health, the controlling and advisory body of the sanitation service, was reorganized, as at present constituted, under the new sanitation act of March 14, 1912. It is nonpartisan and consists of seven members, appointed for an indefinite term by the governor, four of whom are physicians, one a lawyer, one a chemist, and the other a sanitary engineer. The board since its organization, July 1, 1912, has been unceasing in its attention to the routine business as well as the many matters of special importance that have come before it, and its harmonious and helpful cooperation with the executive branch of the sanitation service has contributed much toward accomplishing the results that have been attained by that organization. The board has drafted sanitary regulations covering some 20 different subjects, most of which have been promulgated and are producing gratifying results. Although the members of the board have been engaged in the practice of their respective professions, they have contributed much of their time to the service of the public in attendance upon its sessions, 104 in number during the year.

For several weeks after the presence in Porto Rico of bubonic plague was announced the board remained in continuous session, advising and conferring with the officers of the insular sanitation service, as well as with the officers of the United States Public Health Service, and preparing regulations to assist them in their work, in-

cluding rules for rat proofing and cleaning houses. They also authorized and made rules concerning the vaccination of human beings, under which over 23,000 persons were treated with Haffkine's plague lymph.

During the campaign against bubonic plague members of the board of health visited all the towns of the island, where they held public conferences on general sanitation and hygiene and instructed the people how to guard against the spread of plague and other diseases, thus coming into direct contact with the inhabitants of the various municipalities and conveying to them in person many practical and valuable suggestions.

The legislature in 1913 passed a law authorizing the establishment of seven hospitals in as many districts of the island where, in the judgment of the board, conditions indicated the greatest need for such institutions. Despite the fact that pressure from all sources was brought to bear upon the board to influence it in deciding upon the locations, the board in making the selection was guided only by the relative necessities of the districts considered.

The work of this board throughout its existence has been characterized by painstaking diligence and good judgment, unaffected by political or other influences except the interests of health and sanitation.

INSULAR POLICE.

There has been no change in the organization of the police force. The enlistments during most of the year have been maintained at the maximum of 625, authorized by law, except during the election period of 1912, when 667 special policemen were enrolled for a period of six days. The uniformed police and the detective force both performed meritorious service during the bubonic-plague epidemic, assisting the health authorities by special attention to the enforcement of regulations, by doing inspection work, and by conveying to the people instructions as to preventive measures they should adopt, and in many other ways that made their activities timely and valuable.

The police made 41,658 arrests during the year, as compared with 52,967 during 1912, which, with a decrease in the number of murders and other serious violations of law and order, indicated a notable decrease in crime.

CIVIL SERVICE.

The civil service commission received 1,355 applications from candidates for examination during the 12 months ending June 30, 1913, an increase of 60 per cent over the number received during the previous year. Of these candidates 1,044 were examined and 49 per cent passed, materially increasing the list of eligibles of all classes except stenographers, typewriters, and others requiring technical ability. As a result of this situation the scarcity of eligibles for appointment to positions of these classes still exists and makes selections therefor from the United States necessary. There is no lack of ordinary clerical help. Appointments from eligible lists numbered 164, as against 150 during the previous year.

Special examinations were held for building inspectors, food inspectors, labor inspectors, and sanitary engineers, and for promotions

in the insular police force. The Porto Rican Civil Service Commission also examined over a hundred persons for the United States Civil Service Commission.

Upon the recommendation of the civil service commission the legislature passed an act during the regular session of 1913 amending the civil-service law so as to authorize the noncompetitive examination of employees for promotion, the lack of which authority had constituted a serious difficulty in the past.

BOARD OF MEDICAL EXAMINERS.

The board of medical examiners during the past year has exercised its customary vigilance over the proper qualification of those admitted to the practice of medicine and its branches. Nineteen candidates for license as general practitioners, 10 for minor surgeons, 13 for nurses, 2 for optometrists, and 2 for midwife's licenses were examined during the year and 14 physicians, 4 minor surgeons, 9 nurses, and 1 optometrist were given licenses as a result of proving their qualifications in said examinations.

An amendment to the law governing admission to the practice of medicine was made by the legislative assembly in 1911, which by reason of certain unfortunate provisions made it possible for persons lacking the necessary qualifications to practice medicine. This defect in the law was discovered, however, before many persons had taken advantage of it, and in pursuance of the recommendations of the board it was corrected by the passage of the amendatory act of March 13, 1913.

The board continues consistently to adhere to its policy of requiring the examination of all candidates for licenses, having departed from this rule but once during the past year in the case of an eminent physician who had been educated abroad and who desired to resume his practice in the island.

BOARD OF DENTAL EXAMINERS.

The board of dental examiners, created by the law of 1905 to pass upon the qualifications of and issue licenses to candiates for the practice of dental surgery, has attended to its duties during the year as effectively as possible with the means afforded by the said law, which is somewhat defective in that it affords no facilities for punishing violations of its provisions. One candidate upon investigation was found to have presented fraudulent credentials purporting to have been issued to him by the proper authorities in one of the States, and the papers in the case were sent to the corresponding State board for use in prosecuting the offenders. Notwithstanding the defects in the law mentioned above, the continued vigilance of this board has resulted in a high standard in the practice of the profession of dentistry in the island.

BOARD OF PHARMACY.

During the year the board of pharmacy completed the examination of 42 candidates for licenses as pharmacists, of which 38 passed and were given proper credentials. At the end of the fiscal year the examination of 51 other candidates was in progress, but not completed. Although this board has experienced no little difficulty in

its work, due to certain defects in its organic law, correction of which it has as yet been unable to secure from the legislature, it continues to perform its duties in a manner that insures the greatest protection possible under existing conditions to the public against unduly qualified and inexperienced practitioners.

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BOARD OF VISITORS—CHARITABLE, PENAL, AND CORRECTIONAL INSTITUTIONS.

The board appointed to visit the various institutions maintained by the Government in a recent report emphasizes the desirability of providing in the several establishments facilities for treating their inmates in accordance with the latest scientific methods. The carrying out of this recommendation would, in nearly all cases, involve the construction of new and more commodious buildings than those now in use. The management of the several institutions is reported to be as good as possible with the present inadequate and unsuitable facilities, and a material improvement in the administration of the boys' charity school at San Juan is noted.

COMMISSION ON UNIFORM LEGISLATION.

Porto Rico was again represented at the conference on uniform State laws held at Milwaukee in August of 1912 by the members of the local commission. The report of the commission was duly submitted to the Legislative Assembly of Porto Rico, and the commissioners appeared before committees of the executive council and the house of delegates at various times, recommending the adoption of several laws that had been agreed upon at the national conference. The following legislation was recommended:

A warehouse receipts law.

A law of sales.

A law regarding transfer of shares of stock of corporations.

A law with reference to bills of lading.

Also uniform laws regarding marriage, divorce, and family desertion.

Due to lack of time in which to consider them, the legislature took no action upon these recommendations, but the commission purposes to print the laws recommended, with explanations, so that they can be thoroughly studied by members of the legislature, the judiciary, and the bar, before the next session of the legislature.

BOARD OF COMMISSIONERS OF AGRICULTURE.

The board of commissioners of agriculture now has a competent corps of scientists actively engaged in investigations and practical work along the lines for which this body was created. Research work for the purpose of discovering methods of combating pests and diseases of cane and other crops has been conducted not only in the island, but in the United States, British Guiana, Venezuela, Barbados, and Trinidad. The problems under consideration are the eradication of the May-beetle, sugar-cane moth borers, the "Changa," or mole cricket, and the tobacco flea beetle and hornworm.

The board has benefited by the cooperation of the officials of the United States Department of Agriculture, and the staff of the Porto Rico Sugar Growers' Association Experiment Station in many of its undertakings, and especially is it indebted to the United States Biological Survey Bureau for an exhaustive investigation and report on local birds, which will be published in the near future.

Inspection and quarantine supervision over importations by freight, mail, and otherwise is continued and many articles and insects believed to be infected or dangerous have been intercepted. This work during the year involved the inspection of some 16,000 articles, of which 2,900 were subjected to fumigation, and 1,300 to destruction. Special vigilance has been exercised by the board, with the cooperation of the Department of Agriculture, against the introduction of fruit and sugar cane pests from Mediterranean countries, Mexico, Santo Domingo, and other places in the West Indies. During the past year, under authority of a law passed by the legislature in 1913, the board has extended its operations to the inspection, analysis, and supervision over importations of fertilizers.

The value of the work in which this board is engaged to local agriculture is so fully appreciated that it enjoys the full confidence and cooperation of all those whose interests it affects.

IRRIGATION COMMISSION.

This commission was formally organized in April, after the qualification of the three members elected by the property owners in the irrigation district, and the nomination by the governor of the two appointive members, and immediately entered upon the performance of the duties prescribed by the irrigation law as follows:

(1) To fix the geographical boundaries of the irrigation district so as to include irrigable lands that will receive sufficient benefit from irrigation to justify the expense; and

(2) To ascertain the value of old water rights and concessions to be relinquished in return for service from the irrigation system, and such other duties as might be imposed upon them by law.

Since its organization the commission has made considerable progress in the consideration of the many matters that were awaiting its action, and also rendered valuable assistance in the drafting of important modifications to the irrigation law, for passage by the legislative assembly.

INSULAR FAIR BOARD.

The insular fair board held its third annual exposition at San Juan from February 26 to March 3, 1913. The board was placed in a better position to conduct such an undertaking through the acquisition of a large tract of land centrally located, formerly held by the United States Government as a part of the naval reservation. This tract of land was suitably graded and fenced in and buildings and other structures, including a grand stand and race course, were installed thereon. The time for holding the fair, however, proved to be inopportune. In the work of interesting people throughout the island in furnishing exhibits and other attractions, which necessarily was commenced at the time the campaign against the bubonic plague was reaching its conclusion, the representatives of the fair board encountered much difficulty in convincing people that it was safe

for them to take part in the undertaking. It proved that the fear of the plague and the doubt as to its eradication prevailing amongst those who otherwise would have been classed amongst the exhibitors and visitors kept them away, and therefore exhibits and attendance were not such as to make the event the success that it should have been. Nevertheless, the legislative assembly in March made suitable appropriations for the improvement of the exposition grounds and buildings, and at the same time so amended the law as to provide for the holding of the insular fair every two years instead of annually as in the past. The same act provided for a reorganization of the fair board, the appointment of a manager and assistants with a permanent status, so that special attention will be devoted to timely preparations for the fullest possible participation by local exhibitors in the next celebration, as well as the installation of a permanent exhibit that can be seen by visitors from various parts of Porto Rico and from abroad throughout the year. Many articles for the permanent exhibit have already been secured, and the Department of the Interior at Washington has donated a large amount of furniture, show cases, and other exposition equipment for the purpose.

COMMERCE COMMISSION.

The commerce commission, composed of the governor, the president of the Executive Council, and the speaker of the House of Delegates, has during the past year continued its active interest in the advertising of Porto Rican products and their distribution, and has devoted special attention to the creation of a demand for Porto Rican coffee on the mainland. Due to the activities of the commercial agency maintained by the commission in New York, 228 of the best stores in New York, Brooklyn and other eastern cities are now making a specialty of Porto Rican coffee, packed in attractive packages, and bearing the seal of the Porto Rico Association as a special guaranty of its origin and quality.

As a result of the commission's report to the legislature in March of 1913, an additional appropriation of $35,000 was made to continue and extend the work. The legislature also passed an act, upon the recommendation of the commission, authorizing the incorporation of the Porto Rico Association, providing for the registration of the guaranty seal of the association, and the issuance of permits for its use on such products of the island as by reason of their quality and origin are entitled to the guaranty. It was as a result of the efforts of the commerce commission in New York to secure some remedy for the financial difficulties with which agriculturists in the island have been confronted from time to time, that an act to provide for an agricultural and industrial bank, elsewhere referred to in this report, was passed.

The agency maintained by the commission in New York, with a branch office in San Juan, has continued the distribution of samples of Porto Rican products and printed information about the island and its resources until there is scarcely any part of the mainland that has not been reached, and from which inquiries indicating an interest in the island have not been received.

By another act of the legislature in 1913 the commerce commission was authorized to appoint an agent and establish an agency in Barcelona for the purpose of increasing the sale of Porto Rican coffee in

the Spanish market. As yet the establishment of this agency has not been completed, but it is believed that through its intervention the interests of the Porto Rican coffee producers will be amply protected in European markets against substitution of coffees of inferior origin.

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Municipalities.

The central government, while adhering to its policy of noninterference with the exercise by the municipal governments of their local autonomy, has made every effort to encourage the use of municipal revenues for such public improvements as water supply and sewerage systems, hospitals, public markets, and school buildings. Every possible assistance has been rendered to enable them to secure funds in such amount as is warranted by their financial condition for these purposes, and the response on the part of municipal corporations throughout the island has been almost unanimous. Laws have been enacted by the legislature from time to time, and amended during the past year to authorize and facilitate the financing of municipal improvement bond issues, under which many municipalities have passed ordinances providing for loans. Since the first loan under these acts in 1910, approximately $700,000 have been advanced by the insular treasury to municipalities, and including this amount nearly a million dollars have been expended by them in valuable permanent improvements. These improvements embrace, among other things, eight water-supply systems, two public markets, six public slaughterhouses, three hospitals, two sewerage systems, and one public dock and warehouse. Applications from municipalities for loans for other similar public works, aggregating some $4,500,000, are now under consideration, and it is probable that arrangements will be made to finance $2,000,000 of these proposed loans, selecting for favorable action only the ones that are urgently required as sanitary and other utilitarian measures.

The condition of nearly all the municipal governments is such as to enable them to safely incur the indebtedness necessary to cover the cost of public improvements actually needed for the health and convenience of the people. The gross receipts of municipalities from all sources during the fiscal year 1913 amounted to $2,341,484.10, an increase of $394,878.29 over gross receipts of the previous year, while there was a cash balance to their credit at the end of the fiscal year of $432,553.51. This balance was made up of $161,930.60 in bond redemption funds, and $270,622.91 available for expenditure for current accounts. The total indebtedness of municipalities on June 30, 1913, was $961,733.05, an increase of $398,750.17 over the debt at the end of the previous year. This amount includes bonded indebtedness of $196,554.44 and $686,817.68 advanced by the insular government for public improvements to be covered by additional bond issues.

As a result of the sanitation law of 1912, and regulations issued thereunder, an improvement in the general appearance and sanitary conditions in most of the municipalities is evident, while public works that it has been possible for them to undertake by reason of the recent financial legislation are apparent in better streets, water supplies, sewer systems, hospitals, markets, and other substantial improvements. Additional income from several sources will contribute

in the future to a natural increase in municipal revenues. As a result of an act passed in 1912, some 13,000 parcels of municipal property, aggregating in value $1,567,736, occupied under permits or leased for private purposes, but which had theretofore yielded little or no revenue, are now subject to taxation. A new commercial and industrial license-tax law, effective July 1, 1913, providing for a uniform system of taxation, to be administered by the insular treasury department will, it is estimated, result in a larger income for municipalities than was received from this source of taxation under the old law, under which uniform and equitable classification was impossible. Altogether the municipal governments are to-day in far stronger positions financially and better condition in every respect to serve the needs of the people than ever before and the prospects of their continued improvement, with the aid of recent legislation in their behalf, is encouraging indeed.

Insular Government Finance.

Since 1909 it has been the policy of the insular government in respect to its financial transactions to so control appropriations as to build up and maintain a treasury reserve of approximately one million dollars, to be invested as closely as convenient in municipal bonds. The purposes of this policy are to have on hand at all times sufficient liquid resources with which to meet any emergency that is apt to arise while avoiding tying up the actual cash, and aiding municipal governments in procuring the public utilities required for the health and convenience of the people and at the same time obtaining for the people of Porto Rico a higher return upon the public funds so held than would be possible by depositing the same with private banking institutions. The constantly increasing revenues in harmony with the rapid development of the industries of the Territory during the past four years has made it possible to reach this objective with little difficulty, although the expenditures of the Government have been largely increased during the same period to meet the growing needs of a progressing community.

Another factor that has materially aided in the improvement of the general financial situation as regards governmental activities has been the advance under reassessment since 1909, of 52 per cent in the taxable value of the real and personal property of the island; for, as 99 per cent of the property tax goes to the support of municipal governments and school boards, the corresponding increase of more than 50 per cent in the revenues of those corporations has rendered them more independent of insular Government assistance, and equitably distributed the benefits of the increase throughout the island.

At the beginning of the general reassessment in 1910 the total assessed value of private property in the Territory was $117,600,000, it having been increased to that amount from less than $90,000,000 in 1905, and at the conclusion of the reassessment of the real estate—January 1, 1913—the total assessed value of all property appeared on the tax rolls as $179,271,023, which is intended as well to represent approximately its actual value. Thus it will be seen that the combined values of all property in Porto Rico have been doubled during the last eight years, a not surprising result when it is remembered that the value of the external commerce of the island has increased fivefold

since 1901 and substantially 100 per cent during the last four years. This remarkable progress has been made by energetic efforts and improved methods in all lines of industry, but it could not have been attained had it not been for, nor can it be uninterruptedly maintained without, the protection now afforded or at least the necessary tariff protection to Porto Rican products in the American markets. That this is also the prevailing opinion among the business elements of the island is clearly shown by the changes that have taken place in the business activities of the Territory during the past year, as elsewhere shown, and the results therefrom to the revenue collections, which were due to the fears entertained as to the effects a greater reduction in the tariff than the sugar industry, by far the largest in Porto Rico, could stand and continue profitable.

The total revenue receipts of the island from all sources and for all purposes during the fiscal year amounted to $6,507,480.41, a decrease of $157,868.14 from the receipts of 1911–12.

Of the total income, $1,559,000.96 were collected on account of and for use by municipalities; $565,935.43 for school boards; and $4,382,-544.02 for use by the insular government upon appropriation or in accordance with appropriations already made by the Legislative Assembly. These figures indicate an increase in the receipts of the insular government of $13,380.07 and a decrease in those of the municipalities of $213,118.50. This apparent reduction in municipal receipts is, however, misleading and arises from the fact that 12 per cent of the income of municipalities is set aside to be used by the insular government sanitation service in the cleaning of streets and performance of the other municipal sanitary services formerly attempted by the local governments. And as the sanitary services performed by the insular government for the municipalities cost far more than the amounts contributed by them, their apparent reduction in revenue is a real and great gain, for under the nonpartisan insular service the sanitary condition of the cities of the island has been already greatly improved and will reach the highest point possible in the local environments. The total revenues collected from the same sources as heretofore on account of municipalities were actually $72,236.78 larger than last year. The fact that the 12 per cent contributed by municipalities to the insular sanitation service amounts to $260,875.52, and that said amount is necessarily included in the statement of total insular government receipts, in the absence of explanation, gives the erroneous impression that those receipts were larger than last year, whereas, deducting the amount contributed by the municipalities and which merely passes through insular official hands back to the municipalities in service, the insular government receipts from other and regular revenue sources were less by $247,495.45 than during the preceding year. This decrease in actual insular government revenues represented a reduction in customs receipts of $152,-300.95, in harmony with the decrease in foreign trade, and especially in importations, elsewhere shown; a decrease of $48,740.62 in the excise-tax collections, principally due to smaller local consumption of distilled spirits and cigarettes; and a decrease of $46,453.88 in receipts from fees, fines, and other miscellaneous sources. The amount collected for school boards during the year correctly indicates an increase of $41,870.29, and coming exclusively from property taxes reflects the slight advance in taxable values from last year.

The legislation of the year affecting the revenues of the insular government, and to a slight degree those of the municipalities, consisted of a general revision of the excise and license taxes accomplished through the acts of the Legislative Assembly passed at the regular and special sessions of 1913. This revision was made with a view to increasing the income of the insular government in order to enable it to extend the public-school system, and maintain in suitable condition the territorial roads which, due to increased mileage and traffic, required the allotment of a larger sum than could be made from the revenues formerly available.

The changes made in the rates of taxation under the headings mentioned, based upon transactions of equal volume with those of 1912–13, are expected to result in a total increase of the corresponding revenues amounting to $1,700,000. These changes were effected through the following acts:

No. 112, approved March 13, 1913, and No. 121, approved July 26, 1913, amending the excise-tax rates; No. 67, approved March 13, 1913, and No. 133, approved August 9, 1913, amending the rates of license taxes upon various kinds of business operations; and No. 106, approved March 13, 1913, and No. 134, approved August 12, 1913, revising the municipal license taxes and devoting one-half of the proceeds of the new rates to the insular government.

The first two of these laws increase the rates of excise taxation upon practically all articles subject to such assessment, and add smoking tobacco to the list. The schedules thereunder are expected to produce the results shown by the following table:

Articles.	Unit for purposes of taxation.	Quantity or value assessed during 1912–13.	Rate of tax previous to Mar. 13, and Aug. 1, 1913.	Rate of tax effective after Mar. 13, and Aug. 1, 1913.	Amount of tax collected during 1912–13 under old rates.	Estimated receipts at new rates during 1913–14 based on transactions of 1912–13.	Estimated increase in receipts for 1913–14.
Alcohol:							
Domestic	Liter	3,287,372	28 cents liter	50 cents liter	$939,570.05	$1,643,680	$704,115.95
Imported	do	104,617	do	do	33,049.22	52,308	19,258.78
Beer:							
Domestic	do	774,530	Bulk, 3 cents liter; bottled, 6 cents liter.	Bulk, 5 cents liter; bottled from bulk, 8 cents liter.	44,239.53	57,315	13,075.47
Imported	do	1,659,420	do	Bulk, 5 cents liter; bottled, 10 cents liter.	109,843.92	165,942	56,098.08
Wine	do	989,067	6 cents liter	Still, 10 cents liter; sparkling, 50 cents liter.	65,602.41	98,900	33,301.59
Champagne	do	18,049	27 cents liter	$1 liter	4,873.47	18,049	13,175.53
Cigars	Number	119,038,300	20 cents per 100	30 cents per 100	250,702.45	357,114	106,411.55
Cigarettes	do	464,861,210	$1.10 per M	$2 per M	576,784.90	929,722	352,934.04
Smoking tobacco	Ounce		No tax	1 cent ounce	No tax.	10,000	10,000.00
Cards	Packs	65,769	3 cents pack	25 cents pack	1,990.77	16,442	14,451.23
Patent medicines and perfumery	Value	$716,729.20	5 per cent and 28 cents liter; on alcohol, 5 per cent.	10 per cent and 28 cents liter; on alcohol, 15 per cent.	36,439.52	80,632	44,192.48
Total estimated Increase							1,367,014.70

The second two acts, Nos. 67 and 133, slightly increase the insular government license-tax rates, and it is expected that the changes made will result in an increase of $75,000 in the revenues from those sources.

Act No. 106, above referred to, which was amended in some particulars by act No. 134, is entitled "An act to establish a new system of industrial and commercial license taxes," etc. It repeals the provisions of the municipal law approved March 8, 1906, under which the municipal governments were authorized, within certain limitations, to levy and collect similar taxes, and charges the treasurer of Porto Rico with the duty of levying and collecting such taxes in accordance with a new schedule established thereunder which substantially doubles the rates formerly authorized to be collected by the municipalities, and provides that of the revenues yielded by these taxes 50 per cent shall be paid by the treasurer to the respective municipalities in which collected, and the remainder into the insular treasury as part of the general funds of The People of Porto Rico.

This act will insure the uniform assessment and full collection of these taxes throughout the island, to the advantage of honest taxpayers as well as the municipal governments, and at the same time increase the receipts of the insular treasury approximately $250,000. Thus, if the insular revenue receipts from other sources equal during 1913–14 those of the last year, the total income of the insular government during the current fiscal year should reach $6,082,500. This result, however, is extremely doubtful, if, indeed, possible. The receipts of the first two months of the current year are far below the expectations upon which the revenue estimates for the year were based, and, although the collections of the later months of the year should be considerably increased, the total income will no doubt fall short of the amount anticipated by the legislature when making the appropriations of the regular session of 1913, which, under the circumstances, and conditions now better understood, were excessive. Among the appropriations of this session, in addition to an increase of $1,000,000 for public-school service, which is perhaps a greater advance than should have been made at one time, there are various "nonfiscal-year" appropriations, principally for public improvements and roads desired in different parts of the island, amounting in all to $1,479,616.

The public works authorized by these appropriation acts are, most of them, very desirable, and should be carried out under suitable financial arrangements when the state of the treasury and other conditions warrant the expenditures involved, which is not, however, the case at the present time. The total appropriations of the regular session of 1913 exceeded those of the corresponding session of 1912 by $2,189,834.86, and being in excess of the expenditures warranted by existing conditions should be carefully reviewed, and all of the items and increases that are not actually necessary should be sifted out and postponed to a more opportune time. The necessity for this action is emphasized by the fact that—on account of the expenditures of the fiscal year 1912–13, due to the extraordinary demands of that period, having been $953,588.72 larger than those of the preceding year—the treasury reserve was reduced nearly 50 per cent, to slightly

less than the million-dollar mark, below which it is not believed good policy, except for emergencies, to reduce the available resources.

The large increase in expenditures during the fiscal year 1912–13 occurred principally through the necessity which arose just before the beginning of that period and extended into it for several months of great activity and heavy expenditures, not only by the sanitation service but by the other departments of the insular government, in order to eradicate bubonic plague from the island. The extraordinary expense resulting directly to the sanitation service alone from this work, which included a campaign of rat extermination and rat proofing in all the cities of the island extending throughout the year, amounted to approximately $225,000, and the total expenditures on this account exceeded $300,000. A greatly increased expenditure was also incurred in the maintenance of roads, due to the unusually heavy rainfall of the year and the introduction and use of heavy automobile trucks. This, combined with the heavy expenditures of the interior department for the upkeep and replacement of public buildings and the erection of a few secondary structures, resulted in an increase of expenditures under that department of approximately $280,000. An additional expenditure of $51,000 was made upon the public-school system, and the remainder of the increases were distributed through the various other branches of the service in the improvement or extension thereof to meet the requirements of the public business. Of the total expenditures of the year, amounting to $4,963,763.66, $522,000 were for purposes that increased the total property assets of the insular government to that extent, while $4,441,763.66 were chargeable to public service.

The following summary of the transactions of the insular treasury during the fiscal year 1912–13 is intended to present in the most concise form possible a general view of the income and expenses as well as the receipts and disbursements from all sources and for all purposes during that year; it also shows the total cash on hand and the amount available for expenditure, at its close:

Customs receipts during the year amounted to	$1,028,291.95
Internal revenue receipts accruing to the insular government, made up of $24,897.74 from inheritance tax; $177,585.21 from property tax; $827,487.41 from tobacco tax; $275,582.50 from license taxes; $1,198,376.43 from the tax on spirits and liquors; and $230,325.80 from other taxes, aggregated $2,734,255.09, less $1,598.21 improperly collected and refunded upon protest, or	2,732,656.88
Receipts from fees, fines, and other miscellaneous sources amounted to	621,595.19
Making the total actual revenues collected on account of the fiscal year 1912–13	4,382,544.02
There also reverted to and were paid into the Treasury on account of general fund, representing repayment of loans to municipalities and school boards, repayments of unexpended funds to appropriations, sales refunds from the working capital account of the bureau of supplies, printing, and transportation, and various other minor transfers, aggregating in all	1,044,507.00
Making the total insular treasury receipts on account of general funds available for expenditure under appropriation	5,427,051.02

Receipts on account of trust funds, representing $1,635,411.76 in property taxes on account of municipalities and school boards; $1,334,032.64 from sales of irrigation and harbor improvement bonds, interest on balances, etc.; $175,953.09 in bond redemption tax; and $208,014.77 from miscellaneous sources, amounted to		$3,353,412.26
Bringing the total receipts of the treasury for the year up to		8,780,463.28
This amount, added to the cash balance in the treasury at the close of 1911–12		3,123,383.14
Made the total to be accounted for		11,903,846.42
On account of appropriations by the legislative assembly there were expended during the fiscal year:		
For legislative expenses	$69,168.54	
For all services, public works, improvements and expenses incurred by and effected through the various branches of the executive department of the insular government, including the eradication of bubonic plague	4,204,517.41	
For the support of the judiciary	525,381.65	
For miscellaneous purposes	154,696.06	
Or a total of	4,963,763.66	
Further disposition of available funds in loans to municipalities and school boards, transfers and repayments to appropriations, including repayable advances to the working capital fund of the bureau of supplies, printing, and transportation, amounting to	1,327,816.91	
Brought the total amount expended and disposed of up to		6,291,580.57
Reducing the amount at the disposal of the Government to		5,612,265.85
Dispositions of trust funds, represented by payments to municipalities and school boards on account of taxes collected for them of $1,618,913; expenditures from the irrigation fund, $1,231,366.22; road bond fund, $22,541.41; and repayments and transfers $357,038.13, in all aggregating		3,229,858.76
Reduced the amount to the credit of the government at the end of the year in available resources to		2,382,407.09
Segregating from this the amount representing funds held in trust for specific purposes		1,452,382.18
There remains available for expenditure under legislative appropriation		930,024.91

The total bonded debt of the insular government was increased during the year by the issuance of $1,000,000 4 per cent bonds under an act of the Legislative Assembly, approved March 9, 1913, to provide additional funds for the irrigation project, and an issue of $100,000 4 per cent San Juan port improvement bonds under an act approved March 7, 1912, which increased the total amount of outstanding bonds June 30, 1913, to $5,325,000, against which there were held in sinking funds $448,253.20, leaving the net indebtedness on account of bond issues at that date $4,876,747.80. This total represents an indebtedness of but 2.68 per cent of the value of private taxable property in the island, which is well within the legal limitation of 7 per cent, and constitutes a per capita debt of $4.18. The per capita wealth of the inhabitants of Porto Rico is closely estimated at $280 and the average ad valorem rate of taxation is but 1.22 per

cent, while the per capita ad valorem property tax is $1.42, as against an average of $9.22 in the whole of the United States. Both issues of bonds sold during the year brought satisfactory premiums above par. Those sold for irrigation purposes yielded $1.0125, while the harbor-improvement bonds, which were sold at a time when the market quotations indicated the lowest values of the year, brought $1.027 and accrued interest, the highest price at which Porto Rican bonds have ever been sold. The amortization of the bond issues of the insular government and its dependencies is amply provided for either by special taxes levied on that account or the assignment to that purpose of the dues and fees collected from and in connection with the public utilities for which the money borrowed was or will be used to provide. Hence no part of the general revenues collected for the support of the government are required for the service of the public debt.

Thus the financial position of the insular government at the close of the fiscal year was exceptionally strong; but in order to avoid a situation that may injure the present high credit which Porto Rico enjoys and necessitate the abandonment or curtailing of public services which are now facilitating the development of the people and industries of the Territory, it will be necessary to take into account at this time the following facts and arrange the financial transactions of the insular government during the immediate future to harmonize therewith: The commerce of the island, and therefore the revenues of the insular government, not only ceased to increase, but showed a slight falling off during the last fiscal year; the customs receipts will probably be reduced more than one-third as a result of the revision of the national tariff; the taxable property values have probably reached, or nearly reached, their maximum for several years to come; the internal-revenue taxes have been recently increased to a point from which it will be difficult to advance in the near future; the tariff protection to the principal industry of the country will probably be decreased and finally removed, to the serious injury of that industry; while extensive and costly services urgently required by the people, especially those pertaining to health and education, which should be maintained, have been developed upon the basis of a local prosperity and advancement stimulated by the protection of the national tariff to Porto Rican products, and especially sugar.

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Public Works—Buildings and Lands.

ROADS.

Prior to 1898 the Spanish Government had constructed 275 kilometers of macadamized highways in Porto Rico, of which 134 kilometers are represented by the military road across the island from San Juan to Ponce. The succeeding United States Military Government, during its régime, constructed various connecting roads and extensions were most needed, aggregating 141 kilometers, and since the establishment of civil government in 1901 an additional 657 kilometers have been built, making the total length of the general road system at present approximately 1,070 kilometers, of which 7.7 kilometers were completed during the past year.

The maintenance of these roads presents the same difficulty as the upkeep of macadamized highways in other places where they are used extensively by motor vehicles, and especially heavy automobile trucks. At one time during the past year, after a series of heavy rains, it was necessary to prohibit for a short time the use of all except certain sections of the road system by these trucks pending the repair of the damages caused by them. There are at the present time 960 passenger and 67 freight automobiles using the highways, and their number is gradually increasing, so that the cost of maintenance is constantly increasing expense. Whereas formerly the cost per kilometer averaged less than $300 per annum, it totaled during the past year something like $313 per kilometer, despite the installation of approximately $50,000 worth of stone-crushing plants, gasoline road rollers, and other modern machinery with a view to reducing the cost of furnishing and placing material. An asphalt-surface preservative was used as an experiment on 24 kilometers. The result was so satisfactory in reducing the damage and wear as to indicate the advisability of using an asphalt surface on all roads used for heavy traffic.

MUNICIPAL PUBLIC WORKS.

The Legislature in authorizing bond issues by municipalities to finance public works provided that such work should be done under the supervision of the interior department, in accordance with which that department prepares, or passes upon the plans for and, while under construction, inspects all such municipal engineering projects. Two waterworks systems under construction at the beginning of the fiscal year were completed; three waterworks systems were commenced and completed during the year; and the construction of eight waterworks and sewer systems commenced during the year is still in progress. The plans and specifications for 20 other undertakings of a similar nature were completed and approved, and work on plans for 6 others started; and there are pending 12 applications for studies, estimates and plans from as many different municipalities. Contracts have been let during the year for work aggregating in estimated cost $270,000, while plans completed represent an estimated cost of $844,000.

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EDUCATION.

The daily attendance in the public schools during the past year averaged 117,360, a very slight increase over the average of the previous school year. The total enrollment was 161,785, also but a slight increase over the enrollment of the year before. The task of extending the public-school system met the obstacle of limited funds available for that purpose. It became apparent that to proceed with the accommodation of the gradually increasing enrollment, more school buildings than were being constructed were needed, and with every new school building funds for more teachers, more books, and more equipment were necessary.

The Legislative Assembly had from year to year generously increased the allotments of funds for educational purposes, until in

1913 it found itself in a position where to make further increases in these appropriations to the extent that the demand for additional educational facilities required an increase in the treasury receipts was necessary, and to accomplish this new revenue laws were passed. The appropriation for school purposes was then increased by something more than a million dollars over that for the previous year, and an increase of nearly 800 in the number of teachers, also authorized by the Legislature, will provide accommodations for at least 30,000 more pupils. A change in the law relieving local school boards from the payment of house rent for teachers relieves those boards of an annual expense of over $100,000, which can in future be used for the erection of school buildings, and, together with something over $1,500,000 available to school boards under bond issues for the construction of buildings, will enable many of these boards in the near future to provide their municipalities with all the buildings necessary for school purposes.

The Legislative Assembly also appropriated $150,000 for the construction of four high-school buildings, in addition to the four now in use, the allotment having been made on condition that the municipalities in which they are located contribute a total of $90,000 toward the fund for their erection and equipment. Provision was also made for the construction, equipment, and maintenance of five industrial and agricultural schools in different parts of the island.

Four of the high schools maintained by the department of education during the past year have offered a four-year course, while during the coming year the fourth-year studies will be added to the course given by one of the other high schools. Certificates from the high schools of Porto Rico have been recognized by many of the leading colleges and universities on the mainland in which graduates are pursuing courses. A commercial course has been added to the other studies given in the high schools, two years being required for its completion. The domestic science department of the Central High School at San Juan has awakened much interest, and is gaining such popularity as to present a probable source of material for domestic-science teachers for other schools in the island. The interest in physical culture is rapidly gaining ground, encouraged by the acquisition of athletic appliances, playgrounds, and the holding of frequent athletic meets.

Special attention is being devoted throughout the educational system, from the common schools to the universities, to practical courses, such as manual training, household economy, and agricultural and commercial studies. Instruction in night schools throughout the island, numbering 299, with one exception up to the present time, has been confined to academic courses. In San Juan a night trade school was opened with classes in carpentry, bricklaying, plumbing, and automobile mechanics. The local scarcity of skilled workmen in these trades and the interest displayed by the attendance at these schools would seem to warrant their establishment throughout the island. The total enrollment at this one school was 206. The instructors were all skilled laborers, selected from lists furnished by the Federation of Labor, and it is believed that a sufficient number of suitably qualified artisans are available to furnish instructors for extending the work to other cities of the island in the near future.

The interest in agricultural instruction has been maintained throughout the island to the extent that in many places property owners have placed land at the disposition of the school boards for use in giving practical instruction.

Military instruction in the schools is still meeting with enthusiastic interest. The discipline and training it affords is producing gratifying results in the common as well as in more advanced schools.

A thorough description of the educational system and discussion in detail of the work it has accomplished will be found in the report of the commissioner of education herewith.

JUDICIARY.

The election held November 5, 1912, for the selection of judges and other officials of the 34 municipal courts in the island and the secretaries and marshals of the district courts resulted in placing 23 new judges in the municipal courts and the selection of 32 new men to occupy subordinate offices in the municipal and district courts. Many of these changes in official positions were followed, for political reasons, by changes in subordinate employees. The result was a sweeping change in personnel throughout this branch of the judicial system that turned out experienced and efficient officials and employees and placed in office new individuals, many of them lacking the experience and qualifications necessary to enable them, without more or less confusion, to take up the work of their offices where their predecessors left it. While the new personnel selected was as good as could be expected, the changes resulted in some delay in the dispatch of the business of the municipal and district courts during the year and discrepancies in the records of the number of cases disposed of.

The municipal courts acted upon 31,182 criminal cases and conviction resulted in 20,176, from 1,013 of which appeals to district courts were taken. Civil cases disposed of by municipal courts totaled 4,087, and appeals were taken from decisions in 169 cases.

In the seven district courts four new judges were appointed during the past year. District courts acted upon 2,031 criminal cases during the year, resulting in 1,173 convictions, from which 152 appeals were taken, and disposed of 3,008 civil cases, appeals from decisions in 152 of the latter being taken.

The 59 justices of the peace disposed of 13,056 cases during the year. Convictions were secured in 11,304 cases and 1,752 were acquitted. Appeals were taken from 122 of the sentences.

No changes occurred in the personnel of the supreme court. During the fiscal year it disposed of appeals in 167 criminal and 150 civil cases, acted upon 29 administrative appeals from decisions of registrars of property, and decided 18 cases in which the court had original jurisdiction. The total number of cases of all kinds acted upon was 364, leaving on the calendar at the end of the fiscal year but 32.

The report of the attorney general regarding the work of the judiciary and the department of justice will be found in Appendix VII hereof.

On two occasions during the past year petitions were presented to the governor to designate a justice of the supreme court to act under authority of the act of Congress of January 7, 1913, as judge

of the United States district court during the absence of the Federal judge. This law provides:

> That whenever the United States district judge of the district of Porto Rico shall be absent from the said district, and that fact shall be made to appear by the certificate in writing of the United States attorney or marshal of that district, * * * or when for any reason the said judge shall or may be disqualified or unable to act as such, * * * the governor of Porto Rico may * * * designate a justice of the Supreme Court of Porto Rico either as temporary judge of said court or as special judge thereof. * * *

The first petition was presented during the time that elapsed between the date of the qualification of the present Federal judge and the date of the resignation of his predecessor. It was decided that the wording of the act of Congress made its provisions applicable only to cases of absence, disqualification, or inability of the person holding the position of judge, and not to a vacancy due to the fact that no judge had been appointed, and therefore, as there was no judge of the Federal court at the time, action upon the petition could not be taken.

The second case arose during the absence of the present Federal judge from the island, and one of the justices of the supreme court was designated to take jurisdiction over the matter presented for action. An interesting fact in connection with this temporary occupancy of the United States district judgeship is that, the justice designated being a Porto Rican, educated in the Spanish language, who does not speak English, there having been no American member of the supreme court in the island at the time, it is probably the first occasion in the history of the United States upon which a judge who is unable to speak the English language has been called upon to administer the affairs of a Federal court.

The first case, cited above, clearly indicates a defect in the law of January 7, 1913, that should be corrected. While the conditions at that time existing may seldom be duplicated, nevertheless there is a possibility of as serious, or at least as embarrassing, complications due to a vacancy in the Federal judgeship as to the temporary absence of the occupant of that position.

Among the decisions of special interest rendered during the year by the Supreme Court of the United States, in cases originating in the courts of Porto Rico, was in the case of The People of Porto Rico *v.* Rosaly, in which it was held that the body politic created by the act of Congress of April 12, 1900, known as "The People of Porto Rico," is a sovereign body that can not be sued without its consent expressly given by act of the Legislature. Another important decision was one given in the case of the American Railroad Co. of Porto Rico *v.* Didrickson, in which it was held that the Federal safety-appliance act, as amended, is applicable to and in force in Porto Rico. The decision appears to be in effect a ruling by the Supreme Court that Porto Rico is a Territory, within the meaning of that term as used in the safety-appliance act. This decision therefore raises the question as to whether or not the interstate-commerce laws, and the jurisdiction of the Interstate Commerce Commission also extends to Porto Rico. It is a question that should be disposed of by appropriate legislation, as recommended elsewhere in this report, so as to prevent confusion between the jurisdiction of the Interstate Com-

merce Commission and the insular government in many matters concerning public carriers, of purely local interest, by giving the Executive Council of Porto Rico full jurisdiction and power to act.

* * * * * * *

Conclusion.

In conclusion, attention is invited to the following matters, hereinbefore mentioned, which are believed to be especially worthy of early consideration by the department:

(1) Cooperation between the Federal and insular governments for the improvement of San Juan Harbor.

(2) Confirmation of title to the swamp lands around San Juan Bay in The People of Porto Rico, and the conveyance thereto of the lands between shore and harbor lines.

(3) General plans under which the swamp and reclaimed lands around San Juan Bay may be utilized.

(4) Congressional action conferring power upon the Executive Council to enforce Federal safety-appliance acts and to perform functions similar to those of the Interstate Commerce Commission in Porto Rico.

(5) Federal appropriation to aid in the eradication of uncinariasis (hookwork disease).

The revision of the organic act in such manner as to furnish legal authority for the efficient organization of the insular government in harmony with the needs of the people and existing conditions is also necessary to satisfactory progress. Great advance has been made during recent years in all of the industries and activities of the Territory, and the point is not far distant after safely reaching which internal enterprise, stimulated by improved health conditions and the influence of public schools, will become a potent factor in developing The People of Porto Rico as a whole into a sound body politic, capable of safely administering its own affairs with proper regard for the rights and interests of its individual members. In the meantime the brave, intelligent, patriotic Porto Rican leaders who are struggling against the evil influences of ignorance and prejudice to raise their people to a state in which they can secure to themselves the individual liberty and make use of the opportunities that await them should not be hampered by the uncertainty of power, confusion, and friction in governmental affairs that are invited and, except under extraordinary conditions, produced by the present constitution of Porto Rico, which has long since been outgrown.

It is a pleasure to record the fact that, notwithstanding numerous obstacles to progress encountered, the year which closed with the beginning of this report has been the most fruitful in the history of the island in legislation for the advancement of the people and the protection of labor and that the accomplishment of these gratifying results is due to the unselfish efforts of a patriotic political leadership now supported by the confidence of the Porto Rican people.

Very respectfully, your obedient servant,

Geo. R. Colton,
Governor of Porto Rico.

The Secretary of War,
Washington, D. C.

REPORT OF THE ISTHMIAN CANAL COMMISSION.

ISTHMIAN CANAL COMMISSION,
OFFICE OF THE CHAIRMAN,
Culebra, Canal Zone, September 15, 1913.

SIR: I have the honor to submit the annual report for the Isthmian Canal Commission for the fiscal year ended June 30, 1913.

ORGANIZATION.

The organization continued as outlined in previous annual reports, with but minor changes, until January 1, 1913. Mr. S. B. Williamson, division engineer of the Pacific division, concluding that the work of his division had advanced to such a state that the commission was not warranted in continuing his position, tendered his resignation, effective December 11, 1912; and it was reluctantly accepted. This action necessitated a reorganization of the work on the Pacific side. That part of it relating to the terminals, which during the previous fiscal year had been assigned to the Pacific division, was transferred to the second division, which had charge of preparing the designs for the shops, dry docks, and coaling stations. The locks, dams, spillway, dry excavation between and below the locks, the quarry, and the municipal engineering work was organized into the fifth division of the chief engineer's office and placed in charge of Mr. H. O. Cole as resident engineer. The dredging and the operations for the procurement of sand were constituted the sixth division of the chief engineer's office, under Mr. W. G. Comber as resident engineer.

The jurisdiction of the quartermaster's department extended from Porto Bello to Balboa, and the timekeeping was centralized in the chief quartermaster's office. To this force was later assigned the timekeeping for the various offices at headquarters. When the first division undertook the installation of the machinery at the locks the timekeeping of this division was also turned over to the timekeeping force of the quartermaster's department. The same was done when the fortifications division was organized, and the results obtained from this consolidation were so satisfactory as to lead to the conclusion that economy, without any impairment of accuracy, would result by consolidating all the timekeeping under one head. Accordingly this was done gradually under the examiner of accounts, in order that it might be properly started, and when all work of this kind for all the departments and divisions, except the central division, was combined, the timekeeping force was turned over as a part of the organization of the fourth division of the chief engineer's office on July 1, 1913.

For similar reasons the cost keeping that had formerly been done by the various divisions of the work was gradually consolidated under the chief accountant, so that at the close of the year he had charge of all work of this character, with the exception of that of the central and mechanical divisions.

An architectural force was organized under Mr. Austin W. Lord, architect, July 1, 1912, to draw up the plans of the administration building, a general scheme for the establishment of the new town

that is to be created at Balboa, near the Pacific entrance of the canal, and to prepare designs for the houses for the permanent operating force.

When it was finally decided to turn the water into Culebra Cut in October, 1913, and to complete the remaining excavation by dredges, all the dredging on the Isthmus was combined under one head, with a view to organizing the work so that the equipment could be used to the best advantage. Effective May 1, 1913, the dredging work under the Atlantic division was transferred to the sixth division of the chief engineer's office, thus consolidating it with the dredging organization of the Pacific side. On this same date the dry-dock shops at Cristobal were transferred to the mechanical division.

Effective May 1, 1913, a change was made in the offices of the examiner of accounts and the disbursing officer by which the system formerly in vogue of separate checking of vouchers and pay rolls in each office was eliminated, thereby conforming to the provisions of the act of August 23, 1912, making appropriations for the legislative, executive, and judicial expenses of the Government. The examiner of accounts is now held responsible for the accuracy of the accounts in all details.

CONSTRUCTION AND ENGINEERING.

FIRST DIVISION.

The first division of the chief engineer's office, under Col. H. F. Hodges, United States Army, assistant chief engineer, continued in charge of the design of the locks, dams, regulating works, and accessories; the design and construction of aids to navigation; the inspection of the manufacture and erection, under contract or otherwise, of the lock gates, operating machinery, gates and valves, emergency dams, and chain fenders; and of the placing of such concrete in the locks as was omitted until the installation of the machinery.

The designing work for the locks, including all detail drawings needed by the working force in the field, as well as for the spillways, approach piers, and wing walls, was completed. After performing some work for the second division on the coaling plants and canal terminals, the force in charge of these designs was disbanded on June 1, 1913.

The complete installation for a set of rising stem valves requires setting the valves, placing the stems, roller trains, crossheads, motors, and control panels. It developed that the fixed ironwork for guiding the valves and for forming the water seals required correction before installation could be begun. For all the valves at Gatun and all but two at Pedro Miguel the corrections were made by chipping and grinding with pneumatic hand tools; for the two at Pedro Miguel and all the valves at Miraflores it was done by a specially designed milling machine. Ninety-four per cent of the fixed irons had been corrected at the close of the year. During the year 102 rising stem valve chambers were prepared, including 50 at Gatun, 28 at Pedro Miguel, and 24 at Miraflores, and 104 valves, including trains and sealing devices, were placed in position in the locks. Of this

latter number, 48 were at Gatun, 28 at Pedro Miguel, and 28 at Miraflores.

Tests were made, with satisfactory results, on 39 rising stem gate-valve machines at Gatun, 20 at Pedro Miguel, and 8 at Miraflores. All machines were given a preliminary and an acceptance test, the latter consisting of 10 cycles made at five-minute intervals. The thrust screws must run silently; the temperature of the crosshead nuts must not exceed 50° C., and no heavy vibration is permissible.

Six side-wall intake screens were placed at Gatun and the bulkheads to the center-wall intakes were removed and placed in the outlet. At Gatun the four lower side-wall bulkhead gates were also placed.

Guard valves were provided as duplicates to the upper rising stem valves in emergency, or for use in closing the intakes in the side-wall culverts for unwatering the culverts to permit access to other valves for painting and repairs. The design of the machinery for these valves was completed in August, 1912. The design was determined by the cramped position in which the machines had to be placed; because of the infrequency of operation, as well as their slow speed, it is simpler and cheaper than for the rising stem valve. On November 14, 1912, a contract was awarded for 18 complete machines, excepting the motors, limit switch, counterweight bases, and counterweights, and 50 per cent of the machines were delivered before the close of the year.

The last of the cylindrical valve machines purchased under contract was delivered January 15, 1913. The mechanical installation of the 120 cylindrical valves was completed June 1, 1913, and the electrical work of installing control panels and cables with necessary conduits for these machines was 41.6 per cent complete for all locks. As the result of tests made to determine the leakage of the cylindrical valves, it was decided to regrind all valves so as to allow a maximum average opening around the seat of 0.004 of an inch. The operating machinery is the same for both cylindrical valve and auxiliary culvert valve machines, except that 60-inch and 36-inch strokes are required for the 60-inch and 36-inch auxiliary culvert valves, respectively, instead of the 32-inch stroke of the cylindrical valve. Tests were made to determine the time required to open the various types of valves, with the result that the cylindrical valves required 10 seconds, the 60-inch auxiliary culvert valve 16 seconds, and the 36-inch auxiliary valve 10 seconds.

Tests of discharge were made on the cylindrical valve and the three rising stem gate valves in the spillway. The first series of observations, with heads varying from 8.94 to 29 feet above the center of the valve, gave values of the coefficient of discharge for the cylindrical valve of 0.445 as the mean of three observations, and for the gate valves of 0.592 as the mean of six observations. These observations were complicated by the screens at the culvert entrances, which became clogged with dirt and débris. After the screens had been removed a considerably increased coefficient of discharge resulted for the rising stem valves; the average of 58 observations, with an average head of 29.81 feet above the middle point of the valve, gave a value of the coefficient of 0.68. It is probable that a less favorable value will be obtained in operating the lock culverts on account of the fric-

tion and changes of direction in the stream after it passes the valve. The cylindrical valve was removed before the later and more reliable observations were made.

During the year, 14 gates and 1 caisson for the spillway at Gatun and 8 gates and 1 caisson for the spillway at Miraflores were erected complete, under contract, and the contract closed. The gates at Gatun were installed in position on the dam. The Miraflores spillway was under construction and not ready for them. The draft tubes for the hydroelectric station, which are placed on the east side of the spillway dam at Gatun, were completed.

All the spillway gate machines and pumps for unwatering the counterweight pits, purchased under contract, were delivered during the year and a satisfactory test was made of the first machine erected. The device for shifting the gate upstream a slight distance after it is clear of the water and the mechanism for raising the roller train out of the water after the pressure on the gate is relieved operated properly. At the close of the year the mechanical work had been started on 12 of the 14 machines at Gatun and 71 per cent of the mechanical work on all machines was completed.

The construction and erection of the lock gates was continued during the year under contract with the McClintic-Marshall Construction Co. dated June 21, 1910. All shop drawings were completed, as was the manufacture of all material for the gates, aggregating 57,500 tons; the final shipment was made in April. In addition, about 2,100 tons of structural work for spare parts were built and delivered on the Isthmus, completing this part of the contract with the exception of a few castings, bolts, and rivets. The spare parts comprise sufficient material for partly or completely rebuilding any two-gate leaves on the canal in case of accidental injury. The work of erecting the lock gates proper began at Gatun May 17, 1911, at Pedro Miguel August 7, 1911, and the first work at Miraflores was done on September 10, 1912. At the beginning of the fiscal year work was in progress on half the total number in all the locks, but none of them had been entirely completed. The total amount of steel assembled was only 19,361 tons or about 34 per cent of the total, and much of this was only partly reamed and riveted. The total number of field rivets was about 963,000, or about 18 per cent of a total of over 5,700,000. The work had been allowed to drag so that the task of completing it within a reasonable time seemed hopeless. The contractors decided upon a change in their local management and, beginning about September 1, installed much additional machinery, largely increased their force, and arranged for more efficient supervision. Within a few months the improvements in the organization became manifest; a high degree of efficiency was reached, with a correspondingly large increase in the work done. Some idea of the improvement may be judged from the fact that during the month of March a maximum of 660,000 rivets were driven, while the highest number driven in any one month prior to September 1, 1912, was 213,000. On June 30, 1913, over 97 per cent of all material was assembled in the gates. All the leaves in the west chamber at Gatun and in the east chamber at Pedro Miguel had been stepped on their pintles, and all the leaves in the west chamber at Miraflores, excepting the two leaves of the operating gate in the lower chamber. All the guard gates were complete

except those at the lower end of Miraflores locks, and the guard gates at both ends of the Gatun locks had been permanently closed at the end of the fiscal year. Those at the upper end were put in service about July 20, 1912, and the lower guard gates were closed June 11, 1913; the latter sustain the maximum working head of about 40 feet without appreciable leakage.

A supplemental contract was entered into with the contractors under date of January 14, 1913, by which certain restrictions governing payments were modified, as the original provisions proved to be unnecessarily severe and it was clear that a more speedy completion would be assured by relaxing. The modification provides for successive partial payments on each gate when the assembling, riveting, finishing, and painting have been completed and accepted. A further supplemental agreement was signed May 20, 1913, which gave an extension of time for completing the gates. A number of delays occurred for which, according to the terms of the contract, the contractors could not be held responsible. These were in part due to shipwrecks and strikes, as well as delays caused by the commission. The rate under which the liquidated damages are to be computed was increased, while, on the other hand, new and later dates were fixed for the completion of the several gates. June 1, 1913, was the date fixed for the upper guard gates at Pedro Miguel, and June 15 for the guard gates at the lower approaches to Gatun and Pedro Miguel and the upper approach to Miraflores Locks. The lower guard gates at Miraflores are to be finished by September 1, 1913, and all the other gates necessary to permit the lockage of vessels through one side of each flight, from ocean to ocean, must be completed not later than October 1, 1913, while the date of final completion for all the remaining gates is fixed at January 1, 1914, for Gatun and Pedro Miguel, and March 1, 1914, for Miraflores. From the progress being made by the contractors these dates will be anticipated unless some unforeseen contingency should arise. The total weight of all gates on the canal, excluding pumps, floats and float switches, motors and conduits, and other electrical apparatus, the castings for attaching the operating struts, and the miter forcing machines, is 57,552 tons. The castings and structural parts to be embedded in the masonry were in part furnished under the contract for the lock gates and were erected by the commission in connection with the concrete construction. The total amount thus far expended is $4,820,019.32, of which $4,065,392.01 was paid under the contract, and the balance of $754,627.31 was for inspection and division charges.

The entire shipment of miter gate-moving machines was completed during May, 1913, but the work has been handicapped by the nonreceipt of parts that it is necessary to embed in the concrete and about which the erection of the whole machine hinges. At the end of the fiscal year 86 per cent of all machines had been installed. The electrical work in connection with these machines was 24.2 per cent completed at the close of the year.

The miter gate-moving machines had been installed complete on the upper guard gates at Gatun, and a test was made of this machinery on July 31, 1912. The gate-moving machine was adjusted so that when the strut arm was at dead center on the crank gear

the gates were closed with a compression of the strut for one leaf of five-thirty-seconds inch and for the other leaf of nine-thirty-seconds inch. The limit switches were adjusted so that the gate traveled from its full miter position to the opposite position in the recess, at which point the machine was again on dead center. The gates were started from a miter position and opened to their full position in the recess and again closed. The time of operation of one leaf was 1 minute and 51 seconds and for the other 1 minute and 50½ seconds. The operation was completed a second time. During both operations the mitering of the leaves was perfect. The gates also had installed a miter-forcing machine which had been purchased under contract, and this was tested out on the same date, under approximately actual operating conditions. One leaf was left in its closed position and the other opened a distance of 2 inches. The miter-forcing machine was then operated and it brought the gate to within three-fourths inch of perfect miter. Another trial, with an opening of 3½ inches, brought the gate to a point five-eighths inch from miter. During these tests the miter-forcing machine was operating against the resistance imposed by the strut. As the result of the test several changes were made and the option under the contract of purchasing the remainder of the miter-forcing machines required for all the locks was allowed to lapse and new proposals invited. Under the new contract all the machines required have been delivered. The work of installation, however, was delayed on account of noncompletion of the work on the structural gate parts.

An account of the studies made to determine the most desirable type of chain fender, together with a description of the design selected for the construction of a trial unit, was given in the annual report for 1911. Under the contract entered into on November 4, 1911, all material for the trial fender was delivered on the Isthmus by December, 1912. The erection was begun about January 1 and practically completed by March 1, 1913. During the months of March and April a number of tests were made. The first series consisted of raising and lowering the chain by operating the centrifugal pumps, and the general operation of the machine, including the action of the moving cylinders, girders, and the passing of the chain over the sheaves, was satisfactory from the beginning. The pumps and their motors were of sufficient capacity to raise and lower the chain in the specified time—one minute. The chain dropped uniformly from both lock walls and, in its final position, rested at the bottom for the full width of the lock chamber, with its vertical parts entirely within the chases in the walls. A second series of experiments was made by use of a Lidgerwood unloader to test the operation of the fender under conditions somewhat similar to those that will prevail when the chain is struck by a moving vessel. Under such circumstances the chain will gradually pay out, touching the curved surface of the hawsepipe castings in the walls, over a constantly increasing arc of contact. The movement will be resisted in part by the friction of the chain along the hawsepipes, in part by the internal friction of the machinery, but mainly by the hydrostatic pressure which acts against the upper surface of the moving cylinder. In the final tests made the maximum pressure reached 630 pounds per square inch, when the chain parted near or on one of the lower

sheaves. This pressure corresponded to a stress on the chain of less than one-half the breaking strength obtained in the shop tests. The results obtained seem to warrant the belief that a vessel, unless of very great size or moving at excessive speed, can be checked or stopped without breaking the chain, provided the latter is structurally sound. The great tidal range below Miraflores locks made a modified design necessary. The same system of cylinders is used and the machinery in all its parts is practically the same, but the chain is stretched across the lock at either of two levels, according to the stage of the tide. The chain is endless and, by a stop mechanism, may be operated electrically from the central control house. The chain that passes through either hawsepipe is connected with the operating machinery and is raised or lowered, that which passes through the other hawsepipe remaining at rest.

Plans and specifications for the floating caissons, referred to in previous annual reports, were completed and invitation for proposals issued on May 23, 1913. The caissons will be used for closing the upper and lower entrances to the lock chambers when unwatering them, and will contain a pumping plant of sufficient capacity for pumping out the locks. They are ship caissons, with vertical ends and curved surfaces throughout. Their extreme length is 113 feet 10 inches, molded breadth 36 feet, breadth of the top deck 18 feet, and depth at the side 65 feet. With fixed ballast only, the caissons will float at a draft of 32 feet, which will be increased to a maximum of 61 feet by flooding them when they are put in place on the deepest sills. Trimming tanks are provided to keep the caissons on even keel. The pumping system will include 4 centrifugal pumps of the volute type with a 20-inch discharge, besides a small auxiliary pump. The capacity of each of the large pumps is specified at 13,000 gallons per minute, which will insure the unwatering of any of the locks within 25 hours. The flooding of the caissons will be done by gravity and two of the four large pumps are arranged for pumping them out. The pumps and ventilating fan will be electrically driven, while the cranes and windlasses will be operated by hand.

All the remaining parts of the towing track material to be furnished under contract were delivered on the Isthmus before the close of the year. The total amount delivered aggregated approximately 53,950 linear feet and at the close of the year 36,908 linear feet had been installed complete with concrete, and 11,168 linear feet had been distributed and bolted up ready to be aligned and concreted. The installation of most of the return track has been performed by the Atlantic and Pacific divisions during their construction work.

Bids were invited for towing locomotives on design prepared by the electrical subdivision, and a contract was entered into for furnishing 1 locomotive with the option of purchasing 39 more, or of substituting for this locomotive one built according to the design submitted by the successful bidder. The locomotive was delivered on the Isthmus January 25, 1913, and ready for operation February 7, after which it was tested. The result of the test developed defects, so that changes and improvements were necessary in order to fulfill the conditions required. While the contract provided for making minor changes if found necessary, the changes and improvements which it was decided should be made in order to make the machine satis-

factory could not be classed as minor ones. As a result, advantage was taken of the option in the contract and an order was placed for the required number of locomotives on the design submitted by the General Electric Co., abandoning the design of the commission.

A series of tests was made in Limon Bay on ships of the Panama Railroad fleet, at various speeds and rates of acceleration, to serve as a check on the basis used for the design of the towing locomotives. The size of the ships ranged from 3,500 tons to 10,400 tons displacement at actual draft at the time of the tests. A tug was used which could exert a maximum pull at standstill of about 15,000 pounds. A manila towrope of 7-inch girth indicated a pull on a dynamometer consisting of spiral springs working between circular end plates with a steel scale for indicating the compression of the springs. The start was made from rest, in position alongside the dock, and the ship accelerated to the desired speed as quickly as the power of the tug permitted. The speed was then held constant until a sufficient number of readings had been obtained to insure representative results. Readings were taken of dynamometer pull, tug speed, angle of tow line with center line of tug, angle of tow line with ship, and ship's bearings, at intervals of 30 seconds throughout the run.

The total amount of insulated cable on order to date for all classes of work on locks and hydroelectric station, including the underground lines from the hydroelectric station to the locks, aggregates 2,372,110 feet, of which 1,394,600 feet are lead-sheathed cable and the remainder, 977,510 feet, rubber-covered double-braided wire and cable. About 93 per cent of the total amount required has been delivered complete. A total of 462,729 feet of lead-sheathed cable has been pulled into the ducts, and a large part of the remaining ducts has been rodded and cleaned and is wired with fish wires for pulling in the remainder of the cable as needed. All cable is pulled in ducts by a special winch made on the Isthmus and driven by a small motor. The cable is greased and pulled through the ducts at the rate of 70 feet per minute. A few lengths as long as 900 feet, where duct conditions were favorable, were pulled without undue strain on the cable or appreciable abrasion of the lead sheath. A large number of observations were taken to determine the amount of pull for various lengths and combinations of different cables.

During the year the control scheme for the various locks was completed and contemplates the control of every piece of machinery in the lock walls from a central station, situated on the center wall of the upper locks, where an uninterrupted view of the entire lock or flight of locks may be had. In this house is located a control switchboard connected with every local control panel and indicating mechanism. The switchboard is so arranged that the indicator and control switch of each gate or valve machine is placed in the same relative position to other indicators and control switches as that occupied by the actual machines, so that by means of red and green lights and small models of gates and valves operated by synchronous transmitting mechanisms the operator in the control tower is able to tell at a glance the condition in any part of the locks from the switchboard indications. It is expected that the first board will be shipped by August 1.

The general features of the illumination of the locks were described in the last annual report. A hollow concrete pole with concrete bracket arms and reflectors was designed by the architect for supporting the lamps for exterior illumination of the locks and grounds. The center-wall poles carry a single bracket and lamp projecting toward the chamber, and the side-wall poles carry double bracket lamps, so as to give a broad illumination over the lock chambers and the ground surrounding the locks. The poles are arranged in 4 rows along the whole length of the locks, 1 row on each side wall and 2 on the center wall. They are spaced approximately 100 feet apart, with the lamps 30 feet above the coping level. The lighting units used are 110-volt, 500-watt Mazda lamps.

The generating equipment for the hydroelectric plant was delivered during the year, including the main generators and turbines, with exciter sets, traveling crane, penstocks, head gates, and operating machinery. The steelwork for the hydroelectric station was purchased under contract, and the delivery was completed before the end of the year. The erection of the penstocks is complete and all turbines have been set. The balance of the work of installation is dependent upon the completion of the building for housing the electrical equipment.

During the year it was decided to install for the transmission line an overhead system of 44,000 volts, extending from Balboa to Cristobal, and connecting the Gatun hydroelectric power station with the present Miraflores steam power station, so that they may be operated separately or in parallel, as necessary. Four substations are provided, and located at Cristobal, Gatun, Miraflores, and Balboa. The complete line consists of duplicate three-phase lines, one of which is carried on each side of track-span bridges spaced 300 feet apart on tangents and 200 feet on curves along the whole length of the Panama Railroad. The bridges are of structural steel, with a clear track span of 36 feet, and an over-all height of 40 feet. The conductors are to be 2/0 stranded copper wire spaced with a clearance of 5 feet. They are supported from brackets outside of towers, with three-part suspension insulators, with noncorroding connecting links to allow a maximum life and a minimum of line troubles.

During the year the remaining shop drawings for the emergency dams were completed and approved. Full-sized tests were made upon the gates prior to shipment, as required under the specifications, the object being to insure that the friction upon the rails will not be so great as to prevent the lowering of the gates by their weight alone, and that no objectionable distortions or permanent sets will be produced by the maximum pressure to which the gates will be subjected. Practically all structural material for the turning and wedging machinery for the emergency dams was shipped to the Isthmus and, with a few exceptions, has arrived in excellent condition. The assembling of the east dam at Gatun was begun July 1, 1912, and was practically completed on March 1, 1913. Erection of the west dam was begun on November 9, 1912, and was practically completed in five and a half months, or March 1, 1913. The material for the west dam at Pedro Miguel was received in time to begin erection on February 1, 1913, and practically all of the material has been assem-

bled. Work was begun on April 1, 1913, on the east dam, and by June 30 over 50 per cent of the material had been assembled in the structure and 30 per cent of the riveting had been completed. Delivery of material for the east and west dams at Miraflores began on May 1, 1913, and up to the end of the fiscal year about 840 tons had been received. The erection of the east dam was begun on June 1, 1913, and of the west dam on June 13, 1913. On May 20 the contractor began the final tests of the dam on the east side at Gatun, the total time for closing in the first test being 1 hour 1 minute and 30 seconds. After three complete operations of the dam, as required by the contract, the second part of the test was started, consisting of operating the turning and wedging machinery for 20 days, at intervals depending upon the heating of the motors. These tests were made principally for the purpose of limbering up the turning and wedging machinery. After completing the second part of the tests, three additional complete operations were made in accordance with the contract; the last completely closed the passage in 42 minutes and 17 seconds, which was 19 minutes and 13 seconds less than the time occupied in the first test.

Under the aids to navigation 12 range towers were completed, with some minor exceptions in the Gatun Lake section. These towers are of reenforced concrete, with heights from base to focal plane varying from 28 feet 10 inches to 87 feet 10 inches. Three skeleton tower beacons, marking the edges of the channel between Balboa and Miraflores, were completed. Eighteen concrete-steel reference and range targets were completed in the Gatun Lake section. There will be approximately 32 of this type, by means of which gas buoys may be located from previously determined angles. At Bohio, Pena Blanca, Caimito, Mamei, Juan Grande, and Bas Obispo these reference targets also form unlighted ranges which mark the axes of the short tangents at those places. The reenforced concrete caisson for the west breakwater light and fog signal, which was begun in June of last year, was completed up to a height of 25 feet and was sunk at the inner end of Limon Bay in 20 feet of water, where it will remain until its riprap foundation at the outer end of the breakwater has reached its final settlement. The plans for the west breakwater light and fog signal were revised under the supervision of the architect and the revised structure supersedes the one shown in the last annual report. Fifty-one concrete buoy sinkers 48 by 48 by 26 inches and forty-five 24 by 24 by 18 inches were constructed at the Balboa plant of the lighthouse subdivision. A reenforced concrete wharf 70 feet long and 30 feet wide, adjoining the small boat landing at Gatun, was built for use of the lighting establishment of the canal by the Panama Railroad. It will be used for storing, painting, and repairing gas and spar buoys belonging to the Gatun Lake section. Experiments were made with Tungsten lamps having a spirally wound filament concentrating the light source to spheres of one-half inch for 100-watt and five-eighths inch for 150-watt lamps and, as these proved successful, that type of lamp will be used throughout for all electrically lighted range towers and beacons. Experiments were also made for special flashing devices and lamp shifters for electrically lighted towers and beacons and bids for their manufacture will be asked for in the near future.

Approximately 250 acres of canal prism from San Pablo to Pena Blanca were cleared of trees and brush, and approximately 180 acres of land were cleared of trees in the vicinity of Mamei for the dredging division.

ATLANTIC DIVISION.

The work of this division embraces the construction of the locks and dam at Gatun, the quarry at Porto Bello, the sand supply, the breakwater for the shelter of shipping and protection of the channel at Limon Bay, the municipal improvements in Colon and the various settlements embraced within the territorial limits of the division, and such sanitary engineering work within the same limits as is prescribed by the sanitary department. The work of excavating the channel between the Gatun locks and deep water in the Caribbean was in charge of this division until May 1, 1913, when it was transferred to the sixth division of the chief engineer's office. On this same date the dry dock and shops were transferred to the mechanical division. The work of the division is in charge of Lieut. Col. William L. Sibert, United States Army, as division engineer.

At the beginning of the fiscal year dredges were at work excavating an area north of the caisson sills of the locks, within which the flare or wing walls and the north approach pier were to be constructed. The wing walls are built on rock and the approach pier partly on rock, but for the greater part on piling. For the former it was necessary in some places to remove material to a depth of 70 feet below sea level in order to uncover the rock; and as the dredges could excavate only to a depth of 41 feet, the level of the pool had to be lowered for them to perform the work. To accomplish this a clay dam was built across the cut excavated by the dredges to reach the area, and, when completed, the water in the resulting inclosure was lowered by pumping with the dredges. The excavation for the flare walls was carried well to the rear and made sufficiently wide for the walls and for a rock fill which was to sustain the material back of it from sliding as the water was lowered. This fill also formed a foundation on which to carry the cableway tracks. It was anticipated that by extending the rock fill to the north the cableway tracks could be laid, so that the construction plant could be used to build the entire length of the center approach wall; because of the softness of the material, which, as the water receded, assumed a slope of 1 on 13 in some portions, this plan had to be abandoned.

For the approach pier the dredges removed material to a depth of 55 feet below sea level and for a width of 140 feet along the center of the excavated area. On completion of the dredging in November, 1912, the pit was filled with water, the clay dam removed, a dipper dredge and one suction dredge taken out, and one suction dredge, a pump barge, and two coal barges left inside the area. The clay dam was then rebuilt and water pumped out, exposing the foundations. The dredge was grounded at 55 feet below sea level and was used to keep the water below the foundations. Two steam shovels worked over that portion of the center wall foundations where rock appeared, and also excavated such material from the approach to the west locks as could be handled by them.

The channel excavation and the preparation of the foundations were accomplished by shovel, crane, cableways, and by hand.

The flare walls are built solid. The north approach wall or pier is 58 feet wide and consists of a series of piers placed 50 feet centers longitudinally and 40 feet laterally, in which direction they are connected by arches of 22-foot span, while longitudinally they are spanned by steel girders incased in concrete. In plan the piers are therefore 10 feet by 18 feet. The piers rest upon a slab of concrete, heavily reenforced with old rails near the top and bottom, built on the piling. The first six of the openings north of the locks are closed by curtain walls to prevent objectionable cross currents while the locks are emptying. The plan originally contemplated a pier 1,200 feet in length, measured from the angle of the flare walls. In December, 1912, the division engineer recommended that the wall be shortened 200 feet. A slide had occurred at the north end of the pit when it was dewatered, covering the foundation of this portion of the wall, and the removal of this slide, which would have to be done largely by hand, would be tedious and require considerable time; furthermore, this would make the north approach wall correspond more nearly to the one at the south, which is 994.5 feet long. The local conditions where the south wall was terminated were such as to make the cost of building the additional length prohibitive; however, as a considerable saving in time of completion would result, the recommendation was approved and the length of the north approach pier was therefore fixed at 1,000 feet. The foundation for the pier required the driving of 5,000 piles, aggregating 200,549 linear feet, at a cost of $0.5504 per foot. For the curtain walls 5,657 feet of sheet piling were driven. On January 25, 1913, while this work was in progress, a slide occurred on the east side, which covered a large part of the foundation with from 6 to 18 feet of material, largely mud, destroying two of the pile drivers and delaying the work. The material was partly removed by crane and hand, but largely by sluicing and pumping, the dredge handling the material from the sump into which it was washed.

The concrete in the flare walls was laid by the cableways, which were also used for so much of the center pier as could be reached by them. The remaining portion of the latter was laid by cranes and by means of dump cars operated by construction locomotives, the concrete being supplied by the cableways through hoppers and chutes. The total amount of concrete laid in the locks proper aggregated 164,750 cubic yards; of this amount 137,218 cubic yards were classed as plain concrete, and cost $6.5383 per cubic yard; the balance was reenforced, and cost $10.5762 per cubic yard. In addition, 5,530 cubic yards of concrete were used for the construction of lamp-posts and their bases, snubbing-button bases, machinery-room covers, control house, paving between the upper lock and the Panama Railroad station, under the emergency dams, and for the work of the first division, making the total handled by the Atlantic division 170,280 cubic yards. The total amount of concrete laid in the locks by the Atlantic division up to the close of the fiscal year therefore aggregated 2,040,715 cubic yards, at an average division cost of $7.1220 per cubic yard.

Last fall it was estimated that the concrete work of the locks would be completed by July 1, 1913. By shortening the north approach pier 200 feet, all the concrete, except miscellaneous finishing, was completed on June 14, 1913. The miscellaneous work consists of lamp-post bases, snubbing-button bases, mooring-post bases, stairwell parapets, paving, and the closing of a few openings which were left for construction purposes. Of the amount of concrete laid during the year, 2,742 cubic yards were produced by auxiliary mixers, 1,944 cubic yards were mixed by hand, and the balance by the 2-yard mixers installed in the construction plant.

In addition to handling sand from the barges to the stock pile, the unloading cableways were used for transferring sand and rock from the stock piles to the tunnel hoppers and for loading rock for sale to outside parties. There was sufficient broken stone in storage so that none was crushed during the year. A total of 171,866 cubic yards was taken from the storage pile for use by the division, 1,568.5 cubic yards for issue to other divisions and sale to outside parties. To the storage pile on hand at the beginning of the year 43,851 cubic yards of sand were added, secured from the Chagres River by means of a suction dredge. This sand cost $0.5188 per cubic yard delivered in stock. Cement delivered in bags, amounting to 225,000 barrels, was received and handled, partly by barges from the ship and crane into the cement shed, and partly by car transfer, then by hand into the shed. Of the amount on hand, 227,000 barrels were issued for use.

The back filling of the side walls and the filling of the center wall was made of material obtained from borrow pits and from the canal prism, aggregating 637,226 cubic yards, all of it removed by steam shovels. Of this amount, 565,756 cubic yards were placed behind the side walls at a cost of $0.3805 per cubic yard, and 15,872 cubic yards in the center wall by the cableways at a cost of $0.8320 per cubic yard. The total amount of material used for back fill up to June 30, 1913, aggregated 2,027,830 cubic yards placed behind the side walls at an average cost of $0.4586 per cubic yard, and a total of 113,163 cubic yards placed in the center wall at a cost of $0.7780 per cubic yard. Teams and scrapers were put to work in March, 1913, and continued to the end of the fiscal year bringing the back fill to final grade and for the construction of a wagon road along the east side of the locks. About 1,500 cubic yards of material were handled in this way, at a total expenditure for this purpose of $9,296.82. It was decided to pave the exposed surface of the back fill between the locks and the Panama Railroad station with concrete slabs 5 feet by 5 feet by 6 inches, extending from elevation 78 to the top of the slope, and laid on from 4 to 6 inches of broken stone from Ancon quarry. Below this concrete paving the slope was to be covered with riprap stone down to elevation 74. The concrete paving was estimated to cost $8,000. On June 30, 1913, the surfacing of broken stone was completed and 125 square yards of the concrete paving had been finished at a total cost for the latter to that date of $1,172.91.

The lamp-posts and bases for illuminating the locks were constructed by this division, the bases erected in place, and the lamp standards cast; of the latter, 211 were made at a cost of $149.4299 per lamp-post.

The construction of the control house, designed by the first division, in conjunction with the architect, for the Gatun locks was begun in April, 1913. At the close of the year the three floors and the walls for the first and second stories of the building were completed; the total amount expended was $20,287.51.

At the close of the previous fiscal year the Gatun Dam had been raised to an elevation of 103.35 feet for a length of 1,000 feet east of the spillway, and for the balance of this portion of the dam the dry fills had reached a general elevation of 96 feet and the hydraulic fill between them a general elevation of 85 feet. On the portion of the dam west of the spillway the north and south fills had reached a general elevation of 98 feet and the hydraulic fill an elevation of 87 feet at the spillway and 78 feet at the drains located in the northwest corner of the dam.

At the close of the fiscal year just ended sufficient material had been added to raise the dam to practically its full height, with 3 to 5 feet additional along the axis to allow for settlement. The dry fill was secured from the borrow pit which had been opened during the previous fiscal year, beyond the west end of the dam, and the clay used to top off the hydraulic fill from borrow pits north of the dam and in the vicinity of the locks. From two to six steam shovels were engaged in procuring this material and removed 2,159,159 cubic yards, borrow-pit measurement, of which 922,877 cubic yards were designated as rock. The hydraulic fill was supplied by three pipe-line suction dredges operated in borrow pits upwards 1½ miles distant, the maximum lift being 100 feet. The total amount handled, borrow-pit measurement, was 493,145 cubic yards. The hydraulic fill was stopped in September, 1912. No complete survey was made during the fiscal year, but partial cross sections were run monthly until February, 1913, from which the material in place was calculated, and for the following months, estimates were based on borrow-pit measurement. Under these circumstances it is estimated that the dry fill deposited aggregated 1,714,367 cubic yards, or a loss of 21 per cent of the borrow-pit measurement, due to consolidation. Of the hydraulic fill, it was estimated that there was a loss of 324,141 cubic yards or 65.8 per cent due to waste through drain pipes, leakage, and consolidation. The total consolidated fill for the year aggregated 1,967,841 cubic yards. The cost of the dry fill in place amounted to $0.3755 per cubic yard and of the hydraulic fill $0.2654 per cubic yard. Levels were run monthly with a view to determining settlement, observations being taken on hubs placed about 250 feet apart longitudinally and about 100 feet apart transversely.

On the morning of August 29 a bulging and sliding movement began along the north slope of the dam near the west end. At 7 o'clock in the morning of this date the track which was at the top of the dry fill, elevation 101, settled vertically about 3 feet over a length of about 200 feet, while the track at elevation 63, down the slope, showed slight indications of movement. In the afternoon of the same day a lateral displacement of 8.8 feet had occurred on the 85-foot contour and 5.1 feet on the 50-foot contour; there was no movement on the 30-foot contour. On the morning of August 30 a further settlement and bulging had occurred, giving an additional lateral movement of 3.4 feet on the 85-foot contour, 3.2 feet on the

50-foot contour, while the toe of the slope still remained undisturbed. By the morning of August 31 a still greater displacement had occurred, adding 8.6 feet to the lateral movement on the 85-foot contour, 9 feet on the 50-foot contour, while the foot of the slope was pushed out laterally 6.2 feet on the 30-foot contour. The movement continued through September 1 and ceased September 2. The maximum vertical settlement of the track at elevation 101 was 20 feet, extending for a distance of 750 feet along the crest, affecting not only the hydraulic fill but the north slope of the dry fill to the south of it. The total lateral displacement along the 85-foot contour was 33.9 feet, on the 50-foot level 31.2 feet, and on the 30-foot contour 18.1 feet. The south slope of the dam remained undisturbed. The slope of the portion of the dam which moved was originally fixed at 1 on 5 (section DD, plate 19, annual report, 1909), and this was authorized "because the rock is near the surface and fairly horizontal. The only thing to be provided against in this slope is the slipping of the dam material on itself." Because of the character of the material along this portion underlying the structure there could be no question that the movement was within the dam itself, consequently test pits were not resorted to as in the case of the movement on the east part of the dam, reported a year ago. A line of wash borings with drive samples was made. These borings clearly indicated that the relative proportions of hydraulic fill and dry fill which would bring about the desired section of hydraulic fill—wedge shape, with the point down—had not been secured, but that on the contrary the hydraulic fill in section was the opposite of this. Furthermore, it was evident that provision had not been made against the slipping of the dam material on itself. As in the case of the movement on the north face of the east portion of the dam, the toe was heavily reenforced and the slope flattened to an average of about 1 on 7.67.

To prevent injury to the dam that might result from wash of the south slope by waves in the lake caused by strong south winds, which prevail at times, it was necessary to pave such portion of this slope as is liable to such action. Concrete paving was at first considered, but because of settlement, due to consolidation and the irregularity of the surface, it was decided to use riprap laid on broken stone. It was estimated that waves 5 feet in height might at times exist, so that the paving was extended over that portion of the slope lying between elevations 74 and 92. A layer of crushed stone, supplied by Ancon quarry, was laid over the dam within these limits to a thickness of about 4 inches. Over this a sufficient thickness of riprap was placed to protect the broken stone from the action of the waves. The riprap was at first procured from a quarry in the vicinity of Quebrancha and was estimated to cost $1 per cubic yard in place on the dam. As the cost, however, after a trial of two months, amounted to $2.1027 per cubic yard in place, and as the stone was mixed with a considerable amount of clay, this quarry was abandoned and the stone was furnished from the excavation for the dry dock at Sosa Hill. An area of 115,740 square yards was covered with crushed stone, of which 15,740 cubic yards were used, completing this portion of the work in April at a cost of $2.4536 per cubic yard in place. The riprap stone placed at the close of the fiscal year aggregated 68,730 cubic yards,

covering an area of 102,030 square yards, at a cost in place of $0.6574 per cubic yard.

At the beginning of the fiscal year the spillway dam had been completed, including the abutments, ogee, and crest piers, to elevation 69, while the central portion, about 370 feet in length measured along the crest, had been practically completed to elevation 50. As previously noted, four sluices had been left—three closed by Stoney gates and one by a cylindrical valve—to permit control of the water during the construction of the dam. During the fiscal year the flanks were carried to completion, while the central portion, which had been finished to elevation 50, was left at this height to allow the flood waters to escape during the rainy season. Work on the closing of these openings was commenced as soon as the level of the lake could be dropped below elevation 50 and the work pushed. A trestle was erected on the flanks at elevation 95 and was extended entirely around the dam when the full height of 69 feet was reached. From it the west abutment and part of the crest piers were built to elevation 115, or full height, and the 14 crest gates were installed. On the completion of the west abutment the trestle beside each gate was dismantled in succession and the upstream side of the pier, interfered with by the trestle, was constructed. In February the sluice operated by the cylindrical valve was closed, but it was impracticable to complete the remaining crest piers and east abutment until the three remaining sluices could be closed. The water in the lake, controlled by the sluices, was held at about elevation 32 until the last week in August, when the completion of the guard gates and caisson sills of the locks permitted it to be raised. During November and the early part of December the water reached a maximum elevation of 56.3, notwithstanding the flow through the opening left in the central part of the dam and through the sluices. After the rainy season the water was lowered to elevation 48 so that work might be resumed on the spillway, and the sluices were finally closed on June 27, as the plans contemplated raising the lake to full height during the present rainy season, starting with the water at Gatun at elevation 50 on July 1, 1913. The elevation of the lake at Gatun on this date was 49.15. Advantage was taken of the flow over the spillway to dispose of a number of floating islands, snags, and old timbers which the rising waters had brought into existence and which the wind and current had brought down to the locks and dam. The anchorage basin to the east of the channel and the channel itself for a distance of about 6 miles south of Gatun were cleared. These obstructions in the channel were in places 14 feet thick and consisted of matted snags, sticks, and roots of living vegetation that had apparently floated upward from the floor of the swamp below. Such aggregations were broken into small sections by a floating pile driver.

Concrete laid in the spillway for the year aggregated 21,719 cubic yards, at a cost of $8.1227 per cubic yard. The excavation amounted to 175 cubic yards and cost $2.3913 per cubic yard. The total amount of concrete thus far placed in the spillway was, therefore, 224,132 cubic yards, at an average cost of $7.4838 per cubic yard.

Architectural features were added to the plans prepared by the first division of the chief engineer's office for the hydroelectric power

plant to be constructed below the spillway at an estimated cost of $147,950 and its construction undertaken by the Atlantic division. The excavation was completed and during the year 14,948 cubic yards of material were removed—rock and earth—at a cost of $0.4022 per cubic yard; in the preparation of the foundations 11,684 cubic yards, costing $1.7973 per cubic yard, were removed; the total excavation to date, therefore, including the preparation of foundations, was 98,751 cubic yards, at an average cost of $0.5486 per cubic yard. The steel work for the structure was advertised, and the lowest bid amounted to $25,456.37. The successful bidder offered to erect the steel structure in 45 days and at an additional cost of $6,496.74. As the Atlantic division estimated that the erection could be done in 42 days by its own forces and completed at a cost of $4,643, this work was assigned to the Atlantic division. The erection of the steel work was commenced on May 16, and at the close of the year about 65 per cent had been erected and 90 per cent of the field rivets driven. The amount thus far expended was $6,154.36. The penstocks were encased with concrete, except for the curved portions near the head gates. The forebay walls with trash-rack and stop-plank grooves are about 95 per cent completed.

Work on the west breakwater for Limon Bay was continued throughout the year. A length of 599 feet of trestle, single track, was added, making the total length of trestle 11,526 feet. The total amount of rock received from Porto Bello and placed on the breakwater was 183,762 cubic yards, of which 102,508 cubic yards were handled from barges to Lidgerwood cars by locomotive cranes and subsequently plowed off. The balance was placed by derrick barges. In addition to this source of supply about 220,433 cubic yards of rock removed from the channel by the dredges were dumped on the breakwater. A small pile wharf was built for handling rock by cranes to cars, and 3,000 cubic yards of sand were dredged by derrick barge for the barge berth. The cost of Porto Bello rock placed on the breakwater averaged $4.8250 per cubic yard.

The quarry at Porto Bello was worked during the year for supplying the large rock required for the breakwater. It was intended to develop the quarry in two benches, each with a height of at least 60 feet at the highest point and approximately 1,700 feet long. Because of the peculiar formation of the hill it was found that sufficient large rock could not be secured from the two benches to complete the breakwater, so that this development was temporarily suspended, and in November, 1912, operations were resumed by one steam shovel in the old crushed-rock quarry, above the two benches; after the first of the year two more shovels were put to work on this higher level. The broad-gauge equipment, which was substituted for the narrow gauge previously in service, was placed in operation on October 5, 1912, and in October the output was increased from two to three barges per day. In securing rock of proper size about 60 per cent of the output was wasted.

As previously noted, the Toro Point breakwater is intended for the protection of the harbor and the shelter of vessels against northers, and its line of direction is normal to the prevailing wind during these storms. It is not intended to give protection against the waves produced by the trade winds, which generally are from north to north-

east and which are not dangerous to shipping that will use the canal. The waves from the trade winds have been washing the shores of Limon Bay in the vicinity of the canal entrance, and survey made in March, 1913, showed that the channel in the vicinity of the shore line, which had been dredged to full depth, had filled so as to give an available depth of only 27 feet and that in the center of the channel. It was also estimated that the silt deposited in the channel during the previous 12 months was 2,213,082 cubic yards. As the result of investigation it is believed that this silting is largely due to wave action disturbing the soft material of the bottom of the bay, which is taken up and carried in suspension and subsequently deposited in the deeper channel. The deposit is generally uniform except in that part near the shores of the bay. The Atlantic Fleet during its visit to the canal last winter anchored under the lee of the west breakwater, and at times the trade winds made it difficult for small boats to reach the ships, and, as a consequence, the General Board of the Navy advocated the construction of a detached breakwater for the protection of the anchorage area, stating that at times it would be dangerous and, at times, impossible for small boats and barges engaged in coaling battleships to lie alongside. Under these circumstances, and as such a breakwater will protect the channel to some extent against the wave action causing the silting, by breaking up the waves, the construction of a detached breakwater on the east side is contemplated. Investigations were undertaken in an endeavor to find a quarry more accessible than Porto Bello. To still further protect the channel against material washed from the shores of the bay experimental stone dikes are to be constructed.

As previously reported, the existing water supply for Colon was not adequate and plans were submitted for the construction of a modern filtration plant and pumping station to take the place of the present plant. This project was approved on July 12, 1912, at a total cost of $193,768. It contemplates a tunnel through the divide separating the Gatun Lake from the Brazos Brook Reservoir within which is to be laid a 20-inch main, with its inlet at an elevation of approximately 5 feet below the extreme low water level in Gatun Lake. This pipeline, 600 feet in length, extends to the Brazos Brook Reservoir, and by means of a control house the water in the reservoir is maintained at a minimum low level of 1 foot below the spillway crest, so that any additional amount of water required over that furnished by the watershed will be taken from Gatun Lake. An additional 20-inch main was laid from Brazos Brook Reservoir to Mount Hope, the site of the new purification plant and pumping station. In connection with these there are included an aeration basin, sedimentation basin, and filters after passing which the water enters a clear-water basin having a capacity of approximately 650,000 gallons. This basin is connected by an underground conduit to the pump sump beneath the floor of the pumping station. The pumps will be operated electrically. Work was commenced in October, 1912, and at the close of the fiscal year all work between Gatun Lake and Brazos Brook Reservoir was practically complete. The pumping station was completed ready for the installation of the machinery; the filter building was completed up to and including the operating floor; the sedimentation basin was 75 per cent completed; and the foundations and floors of the mixing

chambers and aeration basin were laid. In addition to the operation of the purification plant at the Agua Clara Reservoir, the usual maintenance work was carried on during the year.

Approximately 70,000 square yards of macadam were laid and repaired, 44,000 linear feet of road ditches cleaned and dug, 9,500 linear feet of curb and gutter laid, and 4,600 feet of sewers installed. In addition, municipal improvements were carried on in Colon under an appropriation by Congress for the purpose. Of the appropriation of $800,000 made by the act of March 4, 1909, for extending the municipal improvements in Colon and Panama, there were expended during the year in the former locality $53,939.15, making a total expended in Colon to the end of the fiscal year of $505,909.54. In addition to completing improvements previously undertaken, the money was expended in replacing curbs and gutters which had settled, resurfacing, and in extending the improvements to include G Street between Second and Ninth Streets, and in the extension of E Street to its intersection with the Mount Hope Road.

Sanitary work consisted of cleaning and grading 237,000 linear feet of ditches; constructing approximately 53,000 linear feet of ditches, and lining with concrete approximately 26,000 linear feet of ditches. In addition, approximately 6,800 linear feet of pipe and tile drains were laid and cleaned.

CENTRAL DIVISION.

The work of this division embraces the excavation between the Gatun Dam and Pedro Miguel Locks, including diversion channels, the construction of the Naos Island Breakwater, municipal improvements in the various settlements included within the division limits, and such sanitary engineering work in the same area as is prescribed by the sanitary department. The work is in charge of Lieut. Col. D. D. Gaillard, United States Army, as division engineer.

Excavation for the canal prism during the year was confined to Culebra Cut, and 12,582,124 cubic yards were removed. In addition to this, 155,376 cubic yards were excavated in changing portions of the Obispo diversion and 35,888 cubic yards outside of the canal prism for auxiliary work; the total amount of material handled by the central division, therefore, aggregated 12,773,388 cubic yards, of which 10,098,099 cubic yards were classed as rock. The estimated amount removed because of slides was 5,899,200 cubic yards and of this amount 1,593,070 cubic yards of material were taken from the upper reaches of the banks to reduce the quantity to be taken from the bottom, or as a preventive measure against slides and breaks. In other words, 46.67 per cent removed from the Cut was due to slides, as against 35.90 per cent during the previous fiscal year. The amount remaining to be removed was again increased at the close of the year, and aggregates for the Culebra Cut 8,200,000 cubic yards; in other words, there will be an increase for the central division of 9,280,237 cubic yards over the estimate submitted in the last annual report. Of this total remaining, 1,324,944 cubic yards were inside the canal prism lines and 6,860,500 cubic yards estimated for slides, which estimate includes the amount for benching back of the banks so as to relieve the pressure which, crushing the underlying strata, may either increase the extent of existing slides or cause new ones.

The total amount of material due to slides so far removed aggregates 22,570,200 cubic yards, or an increase of 2,304,200 cubic yards over that estimated in the last annual report. Slides and breaks increased as the Cut was deepened. No treatment has proven effective for slides when once developed except that of excavating and hauling away material from the moving mass until the slide comes to rest or until the angle of repose for the particular material in motion is reached.

The predictions of the geologist in the last annual report, with reference to the Cucaracha slide, that " the end of the activity of this slide is now well in sight, however, because all loose surface stone and clay has almost slid off, exposing several large dikes and flows of basalt which would successfully maintain in place most of the remaining material," have not been realized. The bottom grade of the canal had been reached and the widening cuts had progressed satisfactorily until within approximately 60 feet of the line of the prism was reached on the east side, when on January 20 the basalt rocks broke and there slid into the Cut approximately 2,000,000 cubic yards of material extending completely across the Cut, topping the tracks on the 67-foot level and completely stopping the passage of trains from the north. Bottom grade was subsequently reached for sufficient width to put in drainage pipes for handling the water from the north, but the rains saturating the loosened material occasioned a flattening of the slope, thus causing another movement, and the weight of the superimposed mass broke the pipes. Work was continued on the slide during the year, but principally for the purpose of maintaining the tracks on the 67-foot level open for the passage of trains. This slide at the close of the fiscal year covered an area of approximately 50 acres. The total amount removed thus far since July, 1905, when it began moving, is 3,859,500 cubic yards, leaving approximately 1,500,000 cubic yards still to be removed. The material on the south side of the slide is practically all clay, the middle of it consists of clay and spalls, and the north side of it rock with a mixture of clay. The clay and the clay and spalls can be easily handled by suction dredges, while the material on the north side can be handled by dipper and ladder dredges.

From the West Culebra slide 1,922,700 cubic yards were removed during the year, including material taken from the upper benches, making a total from the time this slide developed in October, 1907, of 8,687,600 cubic yards, leaving approximately 2,390,000 cubic yards to remove, if all the material on the top of the bank is taken out. This slide covers an area of 68 acres.

From the slide at East Culebra 1,676,300 cubic yards were removed during the year, making a total of 5,966,200 cubic yards removed since the slide first developed in January, 1907, and it is estimated that 2,000,000 cubic yards remain. This slide covers an area of approximately 55 acres and extends from the north side of Gold Hill for approximately 5,500 feet.

The shovels on the upper reaches of the East Culebra slide were taken out in August, 1912, and replaced in January, 1913. One shovel was taken from the upper reaches of the West Culebra slide in October, 1912, and replaced in July, 1913; there was at no time less than 1 shovel working at this point.

A break occurred on August 20, 1912, north of the one previously reported at La Pita Point, which turned the Obispo diversion into the canal, flooding it and effectually stopping all steam-shovel work to the north. These shovels were removed, an earth dam built across the Cut south of the break to protect the Cut between it and the summit, which area was then freed from water by pumps; and a temporary channel constructed for the diversion. The shovels were concentrated on the summit stretch and continued there and on the upper banks until the dry season. After a new channel had been excavated for the Obispo diversion the slide was attacked and 181,100 cubic yards removed during the remainder of the year.

On the east side of the Cut, north of Gold Hill, there is a French dump included within the East Culebra slide. A crack developed about April 1, 1913, parallel to the Cut and 635 feet distant from its edge, but it does not join the Cut at any point, beginning and ending on the flat in which it appeared. Steps were taken, by means of steam shovels, to bench this portion of the bank and arrangements made for sluicing as much as possible into the valley to the east.

The summit of drainage in the Cut continued about opposite Culebra until the two shovels cutting to grade on the bottom produced one cut through at grade on June 28, 1913. The water south of the summit was drained into the Pacific through the central culvert of the Pedro Miguel Locks. The dike separating the Cut on the north side from the Chagres River remained intact and the pumping plant previously described continued in service to handle the water which drains to the north from the summit, with the addition of two French centrifugal pumps, 17-inch discharge, added after the break north of La Pita Point.

With the opening in the spillway at plus 50, with the upper gates at Pedro Miguel not complete, it was feared that a heavy freshet might top the dike at Gamboa and do injury to the locks. It was therefore decided to raise the Gamboa dike to elevation 78.2, carrying this elevation along the west dike which separates the west diversion channel from the Cut. The amount of material utilized for this purpose aggregated 37,080 cubic yards.

As cracks developed in the sides of the Obispo diversion, giving the appearance of additional slides which, if they occurred, would let the water of the diversion into the Cut, it was decided to relocate the diversion farther to the east and this was done in three places, one opposite Whitehouse, another opposite the division office at Empire, and another around the break north of La Pita Point. This necessitated the handling of 128,076 cubic yards.

The Lirio drainage channel was changed farther to the west, as the old channel ran so near the Cut that it was liable to break through, and in making this change 27,300 cubic yards were handled.

All trains loaded in the Cut were hauled out at either end to the dumps. On account of the grades that had developed due to deepening the Cut, it was necessary to use an average of seven engines per day as pusher engines to get these trains out in carrying the loaded trains up the inclines at either end. With a contracted area of operation, the steam shovels were placed closer together and necessitated an average of six locomotives daily to handle the trains to and from the shovels, besides those used in hauling the trains to the dumps.

Due to the development of slides and beginning February 20, 1913, the split-shift system was inaugurated on shovels working in the slides and on the upper benches, so as to secure 12 hours' work per day. While this increased the cost to some extent, it was more than justified, after the decision had been reached to admit the water into the Cut in October, in order to remove as much of the remaining rock in the dry as possible.

The dumps in use during the year were those at Miraflores, Balboa, along the line of the railroad relocation north of Gamboa, swamp lands in the vicinity of Ancon, and a new dump opened along the line of the Panama Railroad south of Pedro Miguel. It was necessary to abandon the old line of the Panama Railroad in the vicinity of Miraflores Locks, to permit the construction of the spillway, and subsequent to March 4 trains had to be operated over the single track through the tunnel. This reduced the number of trains that could be operated to the south and caused the opening up of the Pedro Miguel dump. Material taken from the upper benches on the east side of the Cut was wasted partly in extending the dump north of Gold Hill that was started two years ago, and the remainder was dumped at Miraflores, Ancon, and Balboa, operating over the Gold Hill cut-off of the Panama Railroad. That taken from the upper benches on the west side was wasted on the old dump at Culebra and on the dumps to the south. A total of 284,755 cubic yards were dumped on the east side of the Cut. At Miraflores 1,288,262 cubic yards were wasted; 3,985,129 cubic yards were used for reclaiming swamps at Balboa and wasted on the Balboa dump; 440,725 cubic yards were used for filling swamp lands northeast of Ancon Hill; and 4,376,080 cubic yards on the Panama Railroad relocation dumps between Caimito and Gamboa. During the year 90 acres were filled in at Balboa, making a total of 474 acres in all reclaimed at this point. Between Balboa Y and Sosa Hill 54 acres of marshy land that it was impossible to drain properly were filled during the year. In addition, 487,108 cubic yards of waste material were furnished other divisions and the Panama Railroad.

As previously stated, the Naos Island Breakwater, extending from the shore at East Balboa to Naos Island—a distance of 3.29 miles—is constructed for the purpose of cutting off silt-bearing currents that would fill the excavated channel in the Pacific and make navigation of the channel more difficult by reason of cross currents. As noted in the last annual report, considerable difficulty was experienced by the method of construction then in vogue, which consisted of dumping material from a single trestle extended in advance of the dump. A plan suggested by Mr. W. G. Comber was considered by a board and adopted. The plan consists of the building of a double trestle extending to Naos Island, dumping to be done on either side, thereby spreading the fill over the treacherous bottom, and carrying it to mean tide as far as the island. When this was done, filling was to commence at the island carrying it to full height. Should the trestle fail, ample length would be left for dumping between the break and the end of the finished portion, while the broken portion was being repaired by pile drivers. On June 30, 1913, the trestle had been entirely completed and filled, with the exception of a stretch about 600 feet long. The total amount of material used for this purpose

aggregated 653,242 cubic yards. The soft material was pushed out and up forming a ridge of mud, intermixed with stones that had been dumped in and carried up by the soft material, parallel to the breakwater and at a distance of approximately 100 feet from it. The total amount expended on the dike by the central division and the Pacific division up to June 30, 1913, was $384,540.89, or about $22.14 per linear foot.

The average division cost of excavation for the year, including plant charges and all items which entered into its accomplishment, was $0.5525 per cubic yard. The total amount removed from the central division since American occupation up to the close of the fiscal year was 107,139,181 cubic yards at an average cost of $0.7105 per cubic yard. Of this total, 93,305,975 cubic yards were removed from Culebra Cut.

Actual construction work on the Empire-Chorrera Road was completed, the convict labor employed on it was transferred to other work, and a small force of paid labor was established for the purpose of placing screenings and doing other work necessary for the completion of the road to the Zone boundary. On November 27, 1912, the construction of a 16-foot macadam road from Gamboa to a point on the Las Cascadas plantation road, about 3,600 feet from the east end of the Empire suspension bridge, was undertaken. This road will have a total length of a little over 5 miles. A stockade was erected at Gamboa to house the prison labor which is engaged on it. The Empire-Paraiso Road was relocated and rebuilt for a distance of 5,608 feet, due to slides along the east bank of the canal. In the village of Culebra 2,370 feet of road were reconstructed on account of slides on the west bank of the canal. At Lirio camp 253 feet of road were constructed. For the preservation of the roads and the comfort of the traveling public the oiling of the highways during the dry season was authorized, and this treatment was applied to approximately 27,000 linear feet of road in the villages of Empire and Culebra. It was necessary to resurface 16,323 linear feet of the Gorgona-Bas Obispo Road.

For the maintenance of water supply to the shops and for other construction purposes, additional pumps were installed and operated at Lirio, Sardanilla River, Gamboa, and Gorgona shops.

Sanitary work consisted in digging 4,698 linear feet of ditches, regrading 602,578 linear feet of ditches, cleaning 1,327,676 feet of ditches, laying 6,426 linear feet of tile drains, constructing 3,852 linear feet of concrete gutters, cleaning 847,852 linear feet of concrete ditches, and clearing 908,331 square yards of brush and grass.

FIFTH DIVISION.

As already noted, on the resignation of Mr. S. B. Williamson, the Pacific division was abolished, effective December 12, 1912, and the fifth and sixth divisions of the chief engineer's office organized. The fifth division has charge of the construction of the locks, dams, spillway, excavation in the dry in the canal prism between and below the locks, the operation of Ancon quarry, municipal engineering work within the area covered by the works of the division, and such sanitary engineering work as may be prescribed by the

sanitary department within the same area. The work is in charge of Mr. H. O. Cole as resident engineer.

Excavation in connection with the Pedro Miguel Locks was completed during the year by the removal of 3,044 cubic yards from the locks proper at a cost of $0.4078 per cubic yard. The bulk of the excavation consisted of the removal of the French dump east of the lock site, and the material was utilized for back fill. In addition to the excavation necessary for completing the locks, 2,190 cubic yards were removed for the construction of the northeast core wall built to prevent the passage of water back of the east wall, which might otherwise occur. This excavation was done by hand, and extended under the tracks of the old Panama Railroad which are in use by the central division; the cost was $3.4297 per cubic yard. To prevent flooding the locks, a cofferdam had been left to the south until completion of the concrete work of the locks, and the subsequent increase in the length of the south approach pier to 1,200 feet prevented its completion until after this cofferdam could be removed. In preparing the foundations for this guide pier and for the wing walls 15,366 cubic yards of material were removed, of which 10,701 cubic yards were rock. The average cost was $2.3885 per cubic yard. The total amount of excavation for the locks, approach piers, and guide walls, including the preparation of foundations, was 1,319,742 cubic yards, and cost on an average $1.0248 per cubic yard. The total amount of concrete placed during the year was 58,367 cubic yards, mixed entirely by auxiliary mixers consisting of two 2-cubic-yard mixers at the north end of the locks on the west side and of an average of 3.05 half-cubic yard mixers which were moved about as necessity required. The concrete was handled either by derricks and locomotive cranes or dumped direct into place through chutes. Of this total 39,465 cubic yards were plain concrete at a cost of $6.5432 per cubic yard and 18,902 cubic yards were reenforced concrete at a cost of $9.7989 per cubic yard. The total amount of concrete placed prior to July 1, 1913, in the Pedro Miguel Locks was 906,293 cubic yards at an average cost of $5.5061 per cubic yard.

The back filling of the lock, wing walls, and center wall was completed during the year, and the riprap finish at the ends of the south wing walls was partially placed. The amount used in the back fill was 367,150 cubic yards, of which 193,212 cubic yards were in the center wall at a cost of $0.3895 per cubic yard, and the balance behind the side walls at a cost of $0.4642 per cubic yard. The total amount of back fill placed up to June 30, 1913, was 806,538 cubic yards back of the lock walls at an average cost of $0.3889 per cubic yard, and 215,149 cubic yards in the center wall at a cost of $0.4480 per cubic yard.

The west dam at Pedro Miguel, consisting of rock-filled sides and puddled-clay core, was completed and the top finished at elevation 107 with clay. The north face was riprapped with hard stone at the 85-foot level. During the year 114,117 cubic yards of fill were added, making the total in the dam 696,558 cubic yards. The average division cost during the year was $0.3312 per cubic yard; the average division cost for the entire dam was $0.4471 per cubic yard.

The Miraflores Locks, including excavation for foundations and the placing of concrete, were carried to completion during the year.

The foundation work for the lower west wall was seriously interfered with and retarded by slides and by the water-bearing strata of the banks. In some places it was necessary to build retaining walls to prevent mud from flowing onto the foundation areas, and the slides which occurred carried away the berm-crane tracks, necessitating the use of auxiliary concrete mixers for laying the wall bases sufficiently high to secure a bearing for the berm-crane tracks. Similar difficulty was experienced with the south guide walls, especially on the east side of the locks, which could be built only in small sections. The concrete would be pushed as far as possible, then stopped until another portion of the slide could be removed, and in this way the slide was gradually encroached upon until the guide or flare wall was completed.

The north flare walls are founded on piles; for that on the west side of the locks the piles are driven in a marsh and the weight supported entirely by friction on the piles. While back filling this the portion of the wall constituting the return bulged slightly, but further movement was checked by depositing material along the face of the return, thus adding a counterweight.

The center approach piers were constructed to the full length of 1,200 feet each from the angle of the flare walls. The north wall is of cellular reenforced concrete construction and is founded on concrete caissons sunk to rock. These caissons consist of reenforced concrete shells 7½ feet in diameter and 1 foot thick, built up in sections 6 feet long and sunk progressively, the bottom shell being fitted with a steel shoe for a cutting edge. The caissons were sunk to bedrock at an average depth of 29.43 feet and filled with concrete, thus forming solid columns to rock. They were spaced 15-foot centers longitudinally and 27-foot centers transversely. The wall was then supported on heavily reenforced concrete girders spanning the caissons in both directions. The south approach wall is of massive concrete and is founded on natural rock.

The construction plant, consisting of four berm and four chamber cranes, supplied concrete in the manner described in the last annual report. The total amount of concrete laid in the Miraflores Locks during the year was 450,792 cubic yards, of which 402,607 cubic yards were plain concrete at an average cost of $5.0273 per cubic yard and 48,185 cubic yards of reenforced concrete at an average cost of $10.8023 per cubic yard. Of the total amount, 308,914 cubic yards were laid by the four berm cranes. The chamber cranes handled 218,135 cubic yards of concrete and 92,359 cubic yards of fill for the center wall. The concrete was furnished in part by the mixers on the berm cranes and by the 2-yard mixers installed on the east wall which operated from July 1, 1912, to October 26, 1912, producing 97,603 cubic yards. In addition to the regular plant, an average of 3.12 half-yard portable mixers were used throughout the year.

The total amount of concrete laid in the Miraflores Locks up to the close of the year was 1,476,895 cubic yards at an average cost of $5.0224 per cubic yard. The concrete work in the locks proper was completed on May 17, except the reenforced concrete floor and stairway in the middle wall at the junction of the upper and lower locks, which were completed on June 10. There remain to be completed lamp-post bases, snubbing-button bases, parapets around the stair-

ways, and the nosing at the end of the south center approach pier which was added during the year to the completed plans.

The total amount of concrete laid in the Pacific Locks July 1, 1913, aggregated 2,382,983 cubic yards at an average cost of $5.2033 per cubic yard.

Back filling the lock walls was continued with material from the locks and prism excavation and aggregated 1,128,769 cubic yards, of which 149,301 cubic yards were in the center wall. The fill back of the lock walls proper was placed at an average cost of $0.4068 per cubic yard and that in the center wall and the center approach piers at an average cost of $0.5973 per cubic yard.

The total amount of the back fill placed behind the walls up to June 30, 1913, was 2,006,054 cubic yards at an average cost of $0.3466 per cubic yard, and in the center wall 157,213 cubic yards at an average cost of $0.6182 per cubic yard.

During September and October, 1912, 9,896 cubic yards were excavated for the spillway dam by the hydraulic method. Owing to the limited space and excessive rainfall this method had to be abandoned and no work was done until the beginning of the dry season, when excavation was resumed by the use of steam shovels and also by hand loading into skips which were handled by derricks and locomotive cranes. The situation was complicated due to the fact that the central division tracks for hauling spoil from the Cut to the south passed through the spillway site, and it was desired to give the central division as much advantage during the dry season as possible. It was assumed that the spillway must be completed by September 1, 1913, and to meet this required the removal of the central division tracks from the site by March 1, 1913; this was not accomplished until March 4, and when the excavation of the entire site could proceed it was found that more material had to be removed than was anticipated and consequently a greater amount of concrete was needed. Difficulty was also experienced due to the fact that the Rio Grande passed through the site of the dam and had to be diverted twice. After the concrete for the west end of the dam was brought up to the elevation of the bottom of the river, a dike was constructed confining the water to a space sufficient to enable it to discharge through an opening that was left in the concrete of the dam, and another dike built on the south side to confine the water after passage through the opening. After these were finished further trouble from this source was avoided. To the credit of those engaged in the construction, the structure was completed, notwithstanding the natural difficulties and the delays for which they were not responsible, on September 1, 1913, including the placing of the gates and the erection of the steel work for the walkway on top. The opening for the passage of the Rio Grande must be left until the gates at Pedro Miguel are completed. In addition to the material removed by the hydraulic method, 124,775 cubic yards were excavated by steam shovels, hand, derricks, and cranes, completing the excavation for the spillway dam at an average cost of $1.6835 per cubic yard.

The total amount of concrete laid in the spillway was 64,142 cubic yards, of which 63,707 cubic yards were plain concrete at an average cost of $5.7556 per cubic yard and 435 cubic yards were

reenforced concrete at an average cost of $19.60 per cubic yard. In laying this concrete narrow-gauge tracks were laid from the berm cranes located on the east side of the locks to the south toe of the dam, ending in various spurs leading to derricks which handled the concrete mixed by the berm cranes and delivered on transfer cars in 2-yard buckets. The berm cranes mixed for use at the spillway 27,619 cubic yards, bucket measurement. In addition, an average of 1.43 1-yard mixers and one half-yard mixer supplied 38,551 cubic yards, bucket measurement.

The west dam at Miraflores was completed during the year, with the exception of the junction of the dam with the back fill along the west lock wall. The hydraulic fill in the west dam was completed during the previous fiscal year and the total amount of dry fill added was 418,375 cubic yards at a cost of $0.4076 per cubic yard. As this dry fill was advanced over the hydraulic fill the softer material was crowded to the center and increased in height and, as it was not sufficiently hard to bear the tracks, an outlet was cut on the west side of the dam through which as much of the soft material as possible was crowded out, assisted by a water jet. What remained was pushed over on the west slope of the dam by raising and crowding the east dry fill. In this way a complete covering was made to full grade, leaving relatively little of the soft material within the dam.

Excavation in the dry between Pedro Miguel and Miraflores Locks and south of the locks was continued throughout the year, the spoil being used for back filling the lock walls, for the dams, and filling in swamp areas on the east and west sides of the canal. The total amount removed during the year was 379,626 cubic yards, car measurement.

In order to divide more equally the excavation between steam shovels and dredges, so as to keep the latter at work, a new dike was built across the canal approximately 3,300 feet north of the old one. After closing down the hydraulic excavating plant which had excavated the area between these dikes to rock at elevation approximately minus 20, the area was drilled to minus 45 and blasted preparatory to being excavated by dredges after the area was rewatered. Steam shovels, prior to turning in the water, took out 59,000 cubic yards of rock. The lower dike was drilled to grade and blown up on May 18, advancing the water to the new dike. The total amount removed below Miraflores Locks by steam shovels was 2,949,943 cubic yards, car measurement.

The total amount of dry excavation in the prism, as shown by cross-section measurements, was 3,120,851 cubic yards, at an average division cost of $0.6622 per cubic yard.

The Ancon quarry was operated throughout the year with a comparatively small amount of time lost for repairs. It had been in operation for about three years without a general overhauling until May 16, 1913, when it was shut down for 10 days for the putting in of various repair parts, including shaft in main crusher, general overhauling of the four No. 6 crushers, lining up of screens, motors, driving shafts, etc. A small No. 5 gyratory crusher taken from the old Rio Grande quarry was installed on the floor of the south end of the rock bins for the purpose of crushing a portion of the larger

rock in order to supply the increased demand for smaller sized stone. The total amount produced was 688,301 cubic yards, of which 424,860 cubic yards were placed in storage, 21,301 cubic yards supplied to the municipal subdivision, and 161,311 cubic yards supplied to other divisions and departments. The total cost of the rock delivered in storage at the locks was $0.7795 per cubic yard; that furnished other divisions and departments was supplied at a cost of $0.7853 per cubic yard.

The hydraulic excavating plant continued at work until December 1, 1912, when it was taken out of service owing to the fact that most of the remaining excavation was hard rock. The material removed by this method was used for reclaiming tidal swamp lands east of and adjacent to the canal prism. The total amount removed during the year was 451,631 cubic yards, at a cost of $1.0113 per cubic yard, making a total removed by this method of 1,549,904 cubic yards, at an average cost of $0.6959 per cubic yard. At this cost the entire plant charge, $432,841.92, was absorbed.

This plant was still in serviceable condition, and the suggestion was made by Assistant Engineer W. L. Thompson that at least a part of it be utilized in sluicing the soft material which was found on the north side of Gold Hill and on the top of the east bank of the Culebra Cut. This bank had been to a certain extent stepped back by steam shovels in the process of lightening the loads on the upper part of the bank, but this work was stopped in August, 1912, on the score that Lidgerwood cars could not be spared for this service and that the material could not be handled economically with steel side-dump cars during the wet season. The rain had cracked the bank badly and part of it had sloughed off and fallen into the Cut. To the north and east of Gold Hill lies the valley of the Obispo, and the material excavated by steam shovels on this upper bench has been deposited on the dump extending almost across the valley of the river. By continuing this dump entirely across the valley and by placing culvert pipes through the dam that would result, the water could be allowed to flow through its former channel and the Obispo diversion to the Chagres River. By tilting these pipes upward on the south side of the dam they would form a spillway to any pool that the dam might make, and calculations indicated that a sufficient pool could be created to furnish water for the pumps to sluice back into the depression to the east some of the clay that would otherwise fall into the Cut. The proposition did not appeal to the officials of the central division, but after the renewed activity of Cucaracha slide it was decided to make use of the sluicing plant for this purpose. The location selected for the pumps and pipe line was such that the rear of Cucaracha Hill could be taken off and washed back into the valley to the east by the use of relay pumps and, further, whatever material remained on the Cut side of Cucaracha Hill could be washed down to the dredges, thereby finishing up Cucaracha slide for good and all. These considerations led to the adoption of this method of sluicing, and the work was placed in charge of the resident engineer of the fifth division. Work on the installation of the hydraulic pumping mains and flumes was started on February 1, 1913. Two boilers and two of the Worthington pumps were erected, with the necessary flumes. The dam has created a lake of approximately 180 acres, with

a drainage area of 4 square miles. The elevation at the bottom of the suction at the pumping plant is 214 feet above sea level, and the elevation of the pipes forming the spillway is 228. The material is washed back into the depression which forms the lake, and discharges at such a distance from the pumping plant that the water used in sluicing is returned to the lake and used over again, thus requiring only a small inflow to keep the lake at constant elevation. Sluicing was begun on June 17, 1913, and 57,274 cubic yards were removed by this method at an average cost of $0.1835 per cubic yard. Booster pumps have been ordered, and when received operations for attacking the rear of Cucaracha Hill will be begun.

To meet an increased demand for water at Ancon and Panama two pressure filters were removed from the Miraflores power house and installed in the Ancon filtration plant. On account of future inundation the 16-inch Rio Grande water main was taken up between Pedro Miguel and the Miraflores power house, and the work of relaying it along the Panama Railroad line was partially completed at the close of the year. Construction work on the locks made it necessary to relay portions of the 10-inch main between the Cocoli pumps and the junction with the 16-inch main at the Miraflores power house.

Grading was completed on the new road from Diablo to Ancon and the macadam was partly placed and rolled at the close of the year. Work on this road included the construction of a 20-foot-span concrete bridge over the Corundu River.

The improvements in the extension of sewer, water, and streets in the city of Panama under the appropriation made by the act of March 4, 1909, of $800,000, were completed by the expenditure during the year of $3,323.95, of which $2,879.80 was for the purchase of a road roller. The total amount expended in Panama for the improvements up to June 30, 1913, was $226,289.91.

Work was started on the permanent town site at Balboa in March and included the installation of 750 linear feet of reenforced-concrete storm sewer and 1,222 linear feet of reenforced-concrete drains, filling hydraulically of a portion of the town site with material pumped from the inner harbor excavation, laying out of the permanent laborers' barracks, and the location of the permanent administration building. In connection with the latter, approximately 36,500 cubic yards of material were excavated preparatory to the installation of foundations, concrete piers for the columns were placed, and the erection of the steel frame for the superstructure was begun.

Sanitary work consisted of cleaning 593,127 linear feet of earth drains, excavating 5,079 cubic yards of new earth drains, sweeping 1,023,382 linear feet of cement drains, filling 2,862 cubic yards of holes and swamps, laying 2,520 linear feet of tile drains, constructing 10,566 linear feet of cement drains, and clearing 131 acres of vegetation.

SIXTH DIVISION.

As already noted, on the abolition of the Pacific division the dredging and the procuring of sand from Chamé for construction purposes were organized into a separate district reporting to the chief engineer. It was decided in February, 1913, to flood Culebra

Cut in October, 1913, by removal of the dike at Gamboa, which at present keeps out the waters of the lake. It was estimated that about 350,000 cubic yards had to be removed from the lake section north of Gamboa and that this could be done most economically by dredging; the Cucaracha slide, which consists largely of clay and small spalls, could not be removed economically by steam shovels after the heavy rains had set in, but could be handled efficiently by suction dredges; the conclusion was reached, therefore, that subsequent to the admission of water into the Cut in October the work remaining could be handled most expeditiously and economically by use of the dredging fleet. To get the fleet in condition to handle the work by that time and to take care of what may remain at the entrances, it naturally followed that best results could be accomplished by concentrating all dredging under one head; consequently, effective May 1, this was done, and the division organized with Mr. W. G. Comber in charge as resident engineer.

The fleet available on the Atlantic side of the canal consists of the seagoing dredge *Caribbean*, 5-yard dipper dredges *Chagres* and *Mindi*, French ladder dredges *Nos. 1* and *5*, and five pipe-line suction dredges. One of the pipe-line dredges, after finishing the hydraulic fill in the dam, was overhauled and laid up in Gatun Lake until the water in the lake was of a sufficient depth for it to begin operations north of Gamboa, the other dredges operated within the canal prism north of about milepost 6, covering a length of about 5 miles of the channel, removing therefrom during the year 5,730,379 cubic yards of earth and 753,029 cubic yards of rock, at an average cost of $0.2093 per cubic yard. On July 1, 1913, there remained to be removed from the prism 1,837,000 cubic yards of earth and 99,600 cubic yards of rock. Of the rock excavated from the channel, 680,176 cubic yards were dumped in the vicinity of the west breakwater, making a total to date furnished by the dredges for this purpose of 1,810,108 cubic yards. Of this amount, 651,000 cubic yards were dumped within the breakwater section proper. In the removal of rock from the channel the drill boat *Terrier* drilled 43,062 linear feet in the prism, breaking a total of 394,526 cubic yards of material. At the end of the fiscal year 40 feet of water could be carried through approximately the first mile and a half of the channel, 35 feet through the next 5 miles, and between this and the locks the depth varied from 10 to 30 feet. The siltage in the canal prism for the year amounted to 2,084,000 cubic yards.

In addition to work in the channel and in the excavation for the wing walls and north center approach pier of the locks already reported, the dredges operated in the vicinity of the new docks at Cristobal, of the dry dock at the same locality, of the mouth of the Mindi in the French canal, and of Margarita Island. In the approach channel to the new docks at Cristobal 665,018 cubic yards of earth were removed at an average cost of $0.0614 per cubic yard, and from the slip between Piers 16 and 17 on the new terminals 155,693 cubic yards of earth and 189,284 cubic yards of coral rock were dredged at an average cost of $0.3089 per cubic yard. The *Terrier* also drilled 4,511 feet at the site of the permanent bridge across the French canal for railroad connection with the coaling plant, and 34,448 cubic yards of material were broken up by blasting. From

the dry-dock basin, to provide mooring berth for the suction dredge *Caribbean*, 3,851 cubic yards were removed, from the French canal at Mindi 295,535 cubic yards of earth were excavated, and 100,957 cubic yards were dredged from Margarita Bay and used for parapet and swamp fill in that locality. The site was cleared for the proposed coaling station on Telfer Island.

At the Pacific entrance of the canal there were employed the seagoing suction dredge *Culebra*, 5-yard dipper dredge *Cardenas*, four French ladder dredges, the seagoing ladder dredge *Corozal*, and one pipe-line suction dredge. The pipe-line suction dredge was transferred from the Atlantic end when it had completed its work on the hydraulic fill for the Gatun Dam. It was dismantled, the hull cut in sections and moved over by railroad to Balboa, and after reerection was put in commission on November 16, 1912. For the remainder of the year it was employed principally in dredging material from the site of the proposed inner harbor and terminal basin at Balboa.

The total amount removed from the canal prism during the year aggregated 4,321,956 cubic yards, of which 1,047,929 cubic yards were rock. The average cost during the year was $0.3238 per cubic yard. At the close of the fiscal year there remained to be removed from the prism 1,847,774 cubic yards of earth and 1,600,000 cubic yards of rock. Of the total amount of rock removed from the canal prism, 121,161 cubic yards were drilled and blasted by the drill barge *Teredo* and 65,953 cubic yards broken by the rock breaker *Vulcan*. The remainder includes rock which had been broken by Star drill operations in previous years and material which could be handled by the dredges without drilling and blasting.

Auxiliary dredging outside of the canal prism aggregated 1,457,342 cubic yards, of which 3,695 cubic yards were of rock. Of this auxiliary work, 1,453,647 cubic yards of earth and 3,695 cubic yards of rock were removed from the inner harbor and terminal basin site. At the close of the year there remained to be removed from the inner harbor and terminal basin, 6,363,240 cubic yards of earth and 372,062 cubic yards of rock. The clearing of this site extended over an area of 1,050,988 square feet and consisted of cutting brush and trees and blasting stumps. An orange-peel dredge excavated 7,800 feet of diversion channel, for draining swamp lands at Balboa to be reclaimed by hydraulic filling.

During the year, 445,658 cubic yards of sand, bucket measurement, were procured from Chamé by dredging and transferred to the sand bins at Balboa at a cost of $0.5378 per cubic yard in the bins. Of this amount, 435,758 cubic yards were transferred to the stock piles for use in concrete construction for the fifth division at a cost of $0.7111 per cubic yard in the stock pile. The sand bins had a total length of 260 feet and were provided with 3 rapid unloading cranes until early in May, 1913, when, because the site of the bins encroached upon the terminal work, 1 unloader was removed and the bins shortened to 175 feet. It is proposed to reerect this crane at Gamboa for use in procuring gravel from the Chagres River for various parts of the work.

Arrangements were made by which two suction dredges and the *Corozal* will be moved into Culebra Cut as soon as the locks will

permit of their passage and the depth of water is sufficient, with a view to attacking Cucaracha slide. The suction dredges will remove the clay and, assisted by relay pumps located on the 95-foot level on the west bank, will discharge into the Rio Grande Valley. The *Corozal* will handle the heavier material, depositing it in the low areas of Gatun Lake. Anticipating the necessity for completing the Cut by dredges, a contract was entered into on January 16, 1913, for the construction and delivery at Colon of two dipper dredges of the largest and most powerful type in use. They are to be equipped with 15-yard buckets or dippers for dredging soft material and 10-yard buckets for rock. Deliveries are expected at tidewater in the United States, ready for shipment to the Isthmus, December 1, 1913, and January 1, 1914. To serve these dredges six dump scows of 1,000 cubic yards capacity were contracted for under date of June 13, 1913; two of these scows are to be delivered on or before December 12, 1913, two on or before January 27, 1914, and the remaining two on or before March 13, 1914.

SECOND DIVISION.

This division has charge of the design and construction of the terminal facilities, meteorological work, supervision of the mechanical division, and of expenditures and allotments for the work. It is in charge of Mr. H. H. Rousseau, United States Navy, as assistant to the chief engineer.

The act approved August 28, 1902, authorizing the construction of the canal directed the President to "also construct such safe and commodious harbors at the termini of said canal as shall be necessary for the safe and convenient use thereof." The estimate of the cost of the canal, prepared in December, 1908, made provision for the construction of the necessary breakwaters, but did not include anything for such harbor improvements as may be classed as terminal facilities, which had been operated and provided heretofore by the Panama Railroad Co. in connection with the handling of its commercial and other business. Early in the progress of the work it was apparent that the terminal facilities required by the Panama Railroad Co. would not be adequate for the probable needs of shipping that would use the canal, and, in view of the fact that the savings on the estimates would probably enable their construction as a part of the canal work, this was advocated in 1910. Action was taken by Congress in the act approved August 24, 1912, authorizing the President to "establish, maintain, and operate, through the Panama Railroad or otherwise, dry docks, repair shops, yards, docks, wharves, warehouses, storehouses, and other necessary facilities for the purpose of providing coal and other materials, labor, repairs, and supplies for vessels of the Government of the United States and, incidentally, for supplying such at a reasonable price to passing vessels." The sundry civil act approved August 24, 1912, made the necessary appropriations for the work. While, in anticipation of favorable action by Congress, some preliminary work was undertaken, active operations could not be begun until last fall; consequently the terminal facilities can not be completed by the time the canal is ready for passing vessels.

The Pacific terminals, which are being constructed by the commission, will consist of a main dry dock capable of docking any vessel

that can utilize the locks, a smaller dry dock for the use of smaller craft, a plant for supplying coal and fuel oil to vessels, the necessary wharves and piers for commercial purposes, and the permanent shops for use in connection with the dry docks.

The Atlantic terminals consist of wharves and piers at Cristobal, including the Cristobal mole, all of which are being constructed by the Panama Railroad at its own expense, and the main plant for supplying coal and fuel oil to vessels; the cost of the coaling plant will be divided between the commission and the Panama Railroad Co., while the commission will furnish facilities for oil. General drawings showing the layout of these terminals will be found in the annual report for 1912.

As already noted, the larger dry dock will be able to dock a vessel 1,000 feet long and will have an entrance width of 110 feet. The depth of water over the top of the blocks at mean sea level will be 35 feet, at mean high water 41.5 feet, and at mean low water 29.3 feet. This dock will rest on rock and for a considerable portion of its depth will be in solid rock. The general design of the dry docks has been worked out and the preparation of detail drawings commenced. Mitering lock gates, similar to those for the canal locks and operated in the same manner, will form the closure to the dock, and beyond the gates proper a seat for the floating caisson which will be constructed for general canal use. The dock will be flooded by means of longitudinal ducts in the side walls communicating with the dock body through grated openings in the floor along the bottom of the walls. The flow of water will be controlled by four metal "wagon-body" valves operated by suitable machinery. The time required for flooding at extreme high water is estimated at 25 minutes. The pumping plant for emptying the dock will consist of four vertical shaft centrifugal pumps driven by electric motors. The discharge from the pumps will be carried through a concrete duct entirely separate from the flooding ducts. The time required for pumping out is estimated at 2 hours and 20 minutes at mean high water. Suitable tracks for a 50-ton locomotive jib crane will be provided entirely around the dock. All necessary capstans and bollards will be installed and a pipe tunnel, with suitable outlets, will be constructed around the dock. Stairways leading to the floor will be built on each side at the entrance, on each side at the head, and at two points along the length of each side wall. At the intermediate points arrangements will be made by which material can be passed into the dock. A contract was entered into October 22, 1912, for one pair of steel mitering leaves and fixed irons to be fabricated and delivered on the Isthmus. These gates differ from those for the canal locks in that the miter and quoin ends are to be fitted with green heart bearing pieces, rather than with the metal bearing pieces provided for lock gates. This change was adopted in the interest of increased water-tightness, as the dock will stand dry for the greater portion of the time, and the amount of metal exposed to the action of sea water will be reduced.

The smaller dry dock will have sufficient length to dock a ship 350 feet long, a width at entrance of 71 feet, with a depth of water over the top of the keel blocks at mean sea level of 16 feet 10 inches, at mean high water of 23 feet 4 inches, and at mean low water of 11 feet

2 inches. This dock was substituted for two marine railways originally contemplated, the Navy Department having expressed a preference for such a dock and local conditions favoring it. This dock will be founded on rock, but the greater part of its walls will be of gravity section. The dock will be closed by a floating steel caisson bearing against granite sills when in place. The method of flooding will be similar to that for the larger dock and the flow of water will be similarly controlled. For emptying the dock the pumping plant of the larger dock will be utilized. Access to the floor of the dock will be by means of four stairways, two at the entrance and two at the head; alongside each of the latter two material slides will be constructed. It will be provided with the same accessories as the larger dock.

The wharves and docks contemplated will consist of a quay wall 1,238 feet long between the head of Slip No. 1 and the northeast end of the new Panama Railroad concrete dock, and 1 pier 1,000 feet long by 201 feet wide. Permanent walls will be built at the ends of the slips, each 303 feet wide, and so constructed that part of the length of each will afford landing places for small boats. Including the length of the wharf constructed for the Panama Railroad Co. and completed during the previous fiscal year, the total water frontage under construction will be about 4,650 feet long. The quay walls and all of Pier No. 1, excepting a center section 50 feet wide, will be supported on circular reenforced concrete piers sunk to rock; the 50-foot center section of Pier No. 1 will be rock fill. The slips will be excavated to 45 feet below mean tide. The elevation of Pier No. 1 and the adjoining wharves at the head of the slips has been placed at 16 feet 6 inches. The level of the quay wall adjoining the Panama Railroad Dock has been fixed at elevation 17, the same level as the Panama Railroad Dock.

The coaling station on the Pacific side will be adjacent to the site of the dry dock and will be capable of handling and storing 100,000 tons of coal, with a possible increase of 50 per cent. Subaqueous storage will be provided for 50,000 tons. Specifications were issued for the coal-handling plants at the two terminals and proposals asked for plants in accordance with the general specifications. These plants are to be delivered and erected in place by the contractor. the substructure and all other work in connection therewith to be performed by the commission with its own forces. Bids were opened on June 14, and when the award is determined plans conforming with the machinery will be prepared for the substructure. The specified rate for unloading coal from vessels into the storage piles has been fixed at 250 tons per hour for each machine, and the desire is to unload two vessels at one time at the Atlantic plant, with two unloading machines to each vessel, and one vessel at the Pacific plant with two machines. The reloading capacity—that is, transferring coal from storage into collier or barge—has been fixed, after consideration of the reloading capacity of modern commercial plants in the United States, at the rate of 500 tons per hour for each machine. It is proposed to equip the Atlantic plant so that two vessels can be loaded at one time, with two machines serving each vessel, and on the Pacific side so that one vessel can be loaded with two machines.

The main machine shops were located at Gorgona, which will be flooded by the lake as the waters rise. The shops at Balboa and Cristobal, in connection with the shipways and dry docks at these localities, were generally adequate for the maintenance and repair of the dredging fleet. With the adoption of the policy of giving repair facilities to any vessel that could use the locks, as well as to the Navy, the construction of new shops near the dry docks became necessary. The permanent shops proper will consist of 18 buildings for the machine, erecting, and tool shops; forge shop; steel storage shed; boiler and shipfitter shop; general storehouse; paint shop; car shop; planing mill; galvanizing plant; lumber and equipment shed; pattern storage; foundry; coke shed; boiler house; roundhouse; gas house; paint house; and sand house. In addition to an office building, there will be 9 auxiliary buildings.

On the Pacific terminals preparatory work was begun as indicated in the last annual report and, when funds became available, operations were pushed as rapidly as possible. The site was cleared by the removal of the settlement at Balboa, as well as the buildings which formed the old town. The Panama Railroad yard was abandoned after a new yard and track facilities were provided for temporary use. Considerable difficulty was experienced in carrying on the work expeditiously and economically because of the interests of other divisions and departments whose work and operations could not be interrupted. To provide room around the head of the location of the main dry dock for tracks and a highway leading to the old French pier, the northwest slope of Sosa Hill was removed, 184,682 cubic yards of rock and 181,729 cubic yards of earth, or a total of 366,411 cubic yards being excavated. The total quantity excavated in preparing the site was 389,567 cubic yards at a cost of $0.5447 per cubic yard. The greater part of this material was used to fill in the adjacent swamp to bring the area up to the adopted grade, and some of the rock was furnished the Atlantic division for paving the south slope of Gatun Dam. The original surface elevation of the dry-dock site was 18; the deepest general excavation for the foundation will therefore be about 74 feet. The lowest shovel cut on June 30 was at 12 feet below sea level, on the coaling-plant site at the southwest end of the excavation. From this site 203,699 cubic yards of material were removed, at an average cost of $0.8461 per cubic yard, of which 56,900 cubic yards were rock. The site for the smaller dry dock is at present occupied by the shipways and shops of the dredging division, which can not be abandoned until other repair facilities for floating equipment are available elsewhere. To protect the entrance of the main dry dock and the entire area to be occupied by the smaller dock, and to enable the removal in the dry of as much rock as possible from the entrance basin of the main dry dock, as well as to facilitate the construction of the coaling-plant quay wall and basin, a cofferdam composed of clay riprapped with rock around these various works was begun on April 1, 1913. When complete it will be about 1,000 feet in length.

For the construction of the quay walls and pier the rock is found at an average elevation of 60 feet below mean tide, in some cases being as high as 33 feet and in others as low as 66 feet below this level.

The elevation of the original swamp was about 9 and the material through which the concrete cylinders are to be sunk is a fine, sticky, black clay with thin strata of sand. The cylinders are sunk by the open-caisson method. They consist of sections of reenforced concrete shell in 6-foot lengths, 1 foot thick, and 7½ feet outside diameter. About 4,750 sections are required and a special plant for their manufacture was built. Steel collapsible forms are used. The bottom section of each cylinder is 8 feet outside diameter and 6 inches thick, with a cutting shoe on the bottom. Excavation was done by hand and by orange-peel buckets. When the cylinders would not sink of their own weight, their descent was facilitated by the use of cast iron and concrete weights in conjunction with the water jet. It was not considered advisable at this late date to increase the plant, so that the progress of sinking the cylinders depended on the crane service available. After the cylinders were sunk several feet into rock they were filled with concrete. They are to be capped by reenforced concrete beams for supporting the floor. The area within which the quay walls and pier are to be constructed was inclosed by a dike which was begun in July of 1912. During the year, of the 28,500 feet of cylinders that will be required to complete the work, 12,435 feet were placed. Of this amount, 8,450 feet were for the main quay wall, 289 feet for the walls at the head of Slips 1 and 2, and 3,696 feet for Pier No. 1. The cost of these cylinders in place averaged $18.4708 per linear foot.

During the year the greater portion of the area to be occupied by the shops was brought up to grade by filling the low swampy land with material made available by excavating operations. The natural surface of the ground was not sufficiently stable to hold up the buildings, so it was found necessary to reach rock for the foundations by excavating to it where sufficiently near the surface, or by driving piles to the rock, which in places was as low as 56 feet below sea level. Near the water front it was necessary to use 4-foot steel cylinders, filled with concrete and sunk to rock, as foundations. During the year the number of piles driven was 3,750 at an average cost of $0.4820 per linear foot, and 7,787 cubic yards of concrete at a cost of $9.2091 per cubic yard were placed in the footings and in the tunnel.

An operating tunnel, running through the center and at right angles to the length of the main shop buildings, is under construction for carrying and making accessible all pipe and cable conduits. The main trunk will have a clear height of 6 feet and a width of 4 feet 6 inches, and with branches of the same height and a width of 3 feet 6 inches. The tunnel will contain all power, light, telephone, and fire-alarm cables, and water, steam, fuel-oil, and compressed-air mains, and the main sewer. Rain water will be carried off the area occupied by the shop buildings by means of surface gutters and drains. For its construction a steam shovel mounted on skids, with a special boom, commenced work on March 20, 1913. Where hard rock is not deeper than about mean sea level the tunnel was built on piers excavated to rock. At all other points it is carried on wooden piles driven to rock and cut off below the mean elevation of ground water. It is built in sections 15 feet in length, special means being provided to make the tunnel as water-tight as practicable.

Work was started on June 5, 1913, on the foundations for machines for the planing mill; a considerable portion of the concrete necessary for these and for the floor of the building was completed during the year.

A little more than 25 miles of track were laid during the year, of which amount 9,212 feet were permanent tracks for the use of the Panama Railroad, the remainder for construction purposes. The road at the foot of Sosa Hill, which had to be reconstructed, was 3,300 feet long.

The steel framework for the shop buildings, aggregating about 6,000 tons, is being furnished and erected under contract dated October 22, 1912, at $0.036 per pound for the main buildings. A supplemental order was given on January 25, 1913, for the steel for nine toilet buildings and one paint house. The rolling of the steel began the last week in February and the first shipment left Baltimore on March 30. On June 30 the status of the work was about as follows: All the material had been rolled in the mill, 66.5 per cent finished in shops, 56.5 per cent shipped to tidewater, and 43 per cent shipped to the Isthmus.

A contract was made October 24, 1912, for 6,500 squares of reenforced cement tile roofing for all quarter-pitched roofs of the machine shops at $10.25 per square delivered and $13.25 per square erected in place, the commission furnishing certain materials, such as sand and cement, and facilities, such as suitable buildings, power, and water. All tile is being manufactured on the Isthmus, at Paraiso. The contract required all plant to be on the Isthmus by January 25, 1913, and the completion of manufacture by June 25, 1913. At the close of the year 49.12 per cent had been manufactured and 7.9 per cent had been laid.

For the Atlantic terminals the quay wall and one pier were practically completed by the Panama Railroad during the year, the material purchased for the steel work for the sheds, and a subsequent contract made for its erection. The Panama Railroad also made diamond-drill borings at the site of the coaling station, and work was begun by the dredging division in June, 1913, on drilling and blasting preparatory to dredging alongside the proposed coaling pier.

In designing the permanent shops the principle was aimed at to reduce to a minmum the cost of repairs and renewals, without exceeding a reasonable first cost. Steel was therefore adopted for the main structural material, for which the only cost for maintenance will be repainting from time to time. The roofing, consisting of reenforced cement tile on the quarter-pitched roofs, should last indefinitely, with practically no cost for maintenance and repairs, and presents a pleasing appearance. Such buildings as have flat reenforced concrete roofs will be waterproofed with first-quality composition roofing. There will be practically no gutters or down spouts, except for drainage of valleys, in which cases copper and similar permanent construction will be employed. Buildings which require it will be closed in with walls of hollow terra-cotta tile, plastered with cement mortar; other buildings, such as the main metal and wood working shops, which do not require to be closed in, will be surrounded with a concrete wall 3 feet 6 inches high, above which there will be movable metal shutters or louvers as protection against wind and rain. The

pattern shop and storehouse will have a second floor consisting of a reenforced concrete slab resting on steel beams and girders incased in concrete. The lumber shed and steel-storage shed will have the first floors surfaced with cinders, sand, or gravel. In the main shops the floor will consist of a concrete base covered with 3½-inch creosoted wooden blocks.

The selection and location of equipment in the different shops was practically completed during the year. The greater number of the machines and tools for the permanent shops will be taken from the present shops. While many of them have seen hard service and are less efficient than those of recent design, it is considered economical to install and use them until the character and quantity of work to be performed by the new plant become definitely known, so as to enable the types and sizes of machines best adapted to the work to be selected. Electric power at 44,000 volts is to be delivered by the transmission line to a substation adjacent to the pump well of Dry Dock No. 1, where the voltage will be reduced to 2,200 volts for distribution. The shops have been arranged in four groups as regards electric distribution and each group provided with transformers and switchboards for reducing the voltage. All power used in the plant will be 3-phase, 25-cycle, 220-volt, except 220-volt direct current in the machine shop for variable-speed tools. Duplicate motor-generator sets will be installed in the machine shop for furnishing the current required.

In anticipation of requirements that will develop after the completion of the canal, investigations and inspections were made during the past two years of the principal floating cranes in the United States and Canada, as well as abroad, with a view to determining the type of crane that will best meet canal requirements. The conclusion was reached that two floating cranes of the largest size would be necessary to meet the conditions that might arise in handling lock and dock gate leaves. These cranes will also be required, as regards lifting capacity, to meet the requirements of the Navy Department. On October 30, 1912, proposals were invited for the delivery of two floating cranes of the revolving type, having a maximum lifting capacity of 250 gross tons. Award was made April 17, 1913, to the Deutsche Maschinen Fabrik, A. G., for approximately $827,550 for the two cranes, to be delivered in 580 days.

An investigation and inspection of the most modern and largest harbor tugs in use on the Atlantic coast of the United States and in the leading ports of England was also made during the last two years, and the estimates for the fiscal year 1913–14 included an amount considered sufficient for the purchase of four such tugs. Arrangements were made at the close of the past year for the preparation of plans and specifications for suitable tugs for the purpose.

Numerous applications have been received from coal dealers for loading space for the handling of their coal in supplying vessels that will use the canal. No authority exists for leasing any land or land under water in the Canal Zone, except the act of February 27, 1909, which provides for the leasing of land for agricultural purposes only. It was never intended that the Government should exercise a monopoly of the coal business on the Isthmus, but to utilize the coal stored here for the use of the Navy in maintaining uniform prices of

this product to shipping. In order to encourage individuals and companies in the business of furnishing coal to vessels which use the canal, the policy has been adopted of providing storage in connection with both coaling plants for the coal piles of individuals and companies who desire to participate in the business. There will be a certain rental charge for the areas and, in addition, a real estate tax of 1 per cent of the value of the improvements, should any be made, and a merchandise tax of 5 cents for each 2,000 pounds of coal sold. The Government will do all the handling and charges for putting the coal into storage and taking it out, charges for the use of coal barges, and other labor in connection with this service will be fixed at cost price to the Government for such service. The same policy was adopted with reference to oil. It is proposed to equip the wharf in the vicinity of the coaling station at the Pacific terminus and docks 13 and 14 at Mount Hope on the Atlantic side with fuel-oil supply and delivery mains in duplicate, together with the necessary pumps, so that the Government will be able to handle satisfactorily all fuel oil, including fuel oil of individuals and companies who may wish to participate in the fuel-oil business on the Isthmus, on the same general terms as those applying to the coal business.

A contract was entered into on October 1, 1912, for four storage tanks 93 feet in diameter and 35 feet in height, each having a capacity of 40,000 barrels, to be erected complete at a total cost of $62,800. At the end of the year these tanks had peen practically completed, two at Mount Hope and two at Balboa dump, southeast of Sosa Hill, and plans are under way to connect them with the water front.

Three first-class meteorological stations at Ancon, Culebra, and Colon were continued throughout the year, each with a full complement of instruments and in charge of a skilled observer. Wind records were kept at Gatun, Pedro Miguel, Sosa, and Miraflores. Twenty-six rainfall stations were in operation, 15 of which were equipped with standard and 11 with automatic rain gauges. Evaporation stations were maintained at Ancon, Rio Grande, Gatun Lake, Brazos Brook reservoir and Colon. Seismograph stations were in operation at Ancon and Gatun. Duplicate automatic tide registers were located at Colon and Balboa. For use by the Fortification Board, maximum and minimum temperatures were recorded on the Miraflores dumps. Regular gauging work was discontinued on the smaller streams at the end of the year 1912, the work being interfered with by backwater from Gatun Lake.

The most important hydrological change during the year was the rise of Gatun Lake. On July 1, 1912, the elevation was 31. The stage of the water fluctuated, as regulated at the spillway, reaching an extreme height of 56.28 feet above sea level on November 29. From studies made it appears that the lake basin is subject to very little seepage or other underground losses. The records of the Chagres River and its tributaries show the calendar year, 1912, to be second in order of dryness since American occupation in 1904. The largest freshet since December, 1910, occurred on November 28 and 29, 1912, when there was a rise of 19.6 feet at Vigia and of 12.3 feet at Alhajuela, the discharge at the latter point being 54,000 cubic feet per second.

The average temperature for the calendar year 1912 was well above normal, especially during the dry season. March was the warmest month at Ancon and April at Culebra and Colon. The highest temperatures recorded in April—97° F. at Ancon and 96° F. at Culebra—established new high temperature records at these stations. November was the coolest month at all stations, the minimum recorded being 65° F. at Culebra.

The rainfall during 1912 was below normal everywhere except immediately along the Pacific coast, although generally heavier than the annual rainfall for 1911. The heaviest precipitation was 147.61 inches, at Porto Bello, and the minimum rainfall was 71.78 inches, at Ancon.

There was a notable excess in wind movement during 1912. The average velocities were abnormally high during the dry season; a maximum velocity of 49 miles an hour from the east was recorded at Gatun. The prevailing direction was from the northwest at Ancon and Culebra and from the north at Colon. The relative humidity was generally below normal, the mean being 81 per cent at Ancon, 82 per cent at Culebra, and 83 per cent at Colon.

A number of seismic disturbances were registered, but none was so violent as to be sensibly felt in the Canal Zone.

Surveys were made of the Miraflores Lake watershed, Corozal Hospital farm, Darien Radio Station reservation for the Navy Department, Chagres River from Gamboa to the Zone boundary to locate gravel banks, and the area in the vicinity of Mount Hope proposed for oil storage. The boundary line between the city of Panama and the Canal Zone was run out and monuments located. An error of 100 meters was found in the recorded distance between triangulation stations Gamboa and Obispo, the recorded distance being 1,093.34 and the correct distance 1,193.34 meters. Considerable survey work was also done for the department of law and the joint land commission.

CONSTRUCTION OF THE NEW PANAMA RAILROAD.

The construction of the new line of the Panama Railroad was practically completed on May 25, 1912, when the portion of the line from Gamboa to Pedro Miguel and back of Gold Hill was turned over to the railroad company and accepted. Work during the year consisted of riprapping the slopes of the embankments through the Gatun Lake section, building a lift span of the bascule type in the bridge spanning the Gatun River at Monte Lirio, and installing automatic signals throughout the line. The work was in charge of Lieut. Frederick Mears, United States Army, chief engineer of the Panama Railroad.

Material from Culebra Cut was utilized during the year in strengthening the embankments near mile posts 20, 21, and 24, and also the embankment in the Brazos Valley. The total amount of material used for the purpose was 257,831 cubic yards.

The bridge across the Gatun River at Monte Lirio consists of the three plate-girder spans formerly used on the old line of the railroad for crossing the Chagres River at Barbacoas. The center span, a 103-foot plate girder, was converted into a lift span by the addition of lifting trusses, lifting mechanism, and counterweight. It will provide a channel 80 feet wide in the clear, with a depth of 45 feet

of water, thus giving ships access to the large area of the lake which lies east of the railroad. The necessary materials were purchased under contract for the sum of $24,390, and the bridge was erected by the forces of the Panama Railroad at a cost of $59,611.20, including a combined operator's house, block office, and interlocking cabin.

Automatic signals were installed from Mindi to Corozal, with the exception of about 4 miles between Caimito and Gamboa cabin, where the main tracks are not on permanent grade and alignment. The signals placed between Pedro Miguel and Corozal were removed when it became necessary to use the new line of the railroad for the passage of dirt trains to enable the cutting of the old line for the construction of the Miraflores spillway.

FORTIFICATIONS.

By the act approved August 24, 1912, an appropriation of $1,000,000 was made for the gun and mortar batteries for the defense of the canal against naval attack, making the total appropriated $3,000,000, which is sufficient for the completion of this portion of the work. In addition, $200,000 were appropriated for land defenses.

Work was continued during the year on the gun and mortar batteries. The detailed surveys necessary for the location of land defenses were well advanced to completion and arrangements made to begin work on July 1, 1913, on the construction of redoubts in accordance with plans prepared by a board appointed for the purpose and approved by the Secretary of War.

During the year 416,542.5 cubic yards of excavation, at an average cost of $0.9225 per cubic yard, were done; 131,952.8 cubic yards of concrete, at an average cost of $7.0670 per cubic yard, were laid; 93,808 linear feet of piling, at a cost of $0.4311 per linear foot, were driven; and 100,957 cubic yards of filling, at a cost of $0.1720 per cubic yard, were done by one of the dredges. The amount expended for gun and mortar batteries was $1,432,767.01, for surveys $41,790.95.

The work was in charge of Lieut. George R. Goethals, United States Army, assisted by Lieut. A. H. Acher, United States Army, and Mr. R. M. Elder and Mr. H. P. Warren as superintendents of construction.

COST KEEPING.

The methods of cost keeping adopted on January 1, 1910, were continued throughout the year. In addition to those reported a year ago, cost accounts were initiated for the erection of permanent buildings, the construction of the electric-transmission line across the Isthmus, and the preparation of permanent town sites. The cost accounts of the first division, which include the erection of the lock gates, emergency dams, lock-operating machinery, and aids to navigation, were revised so as to furnish better information. Supervision of cost data for the construction of a concrete dock at Gatun and of a bridge across the French canal at Mount Hope to connect with the site of the Cristobal coaling plant were added to the duties of the office. These projects, as well as the construction of the dock at

Cristobal and of the new Washington Hotel at Colon, are in charge of the Panama Railroad Co., and their costs are not included in this report. The costs are made up of the labor engaged in and the material applied to the work, an arbitrary to absorb the cost of the plant, and a proper proportion of the division overhead charges. The general expenses of the commission are prorated to the different parts of the work and must be added to the division costs in order to determine the total costs. As the division engineers do not necessarily have control over the items which make up these general expenses, the costs reported are the division costs, except where noted to the contrary. The cost-keeping accountant, Mr. Ad. Faure, reports directly to the chief engineer. His duties consisted, up to October 1, 1912, in supervising and verifying the statements of costs furnished by the division engineers, establishing accounts for new work, and preparing statistical data. On October 1 the preparation of the detail costs for the aids to navigation was transferred to his office; on January 1 that for the reorganized divisions of the former Pacific division and for the first division of the chief engineer's office; and on April 1 that for the Atlantic division. Although the details of costs furnished have greatly increased in the past year, the expense of securing this data has decreased from about $3,600 per month to $3,000 per month.

In the distribution of general expenses, the central division continues to carry the larger proportion, due to the fact that prior to 1907 but little work was done except in this division, so that all the overhead charges were properly added to it.

Excavation by steam shovels in the central division shows an increased cost over last year of $0.0410, the principal item of increase being in the cost of repairs to equipment—$0.0297.

In the Atlantic division the costs for dredging in the prism were lower this year than last, due to the larger ratio of material excavated by pipe-line suction dredges. In the Pacific division the cost was higher than last year, due to the larger ratio of rock excavation and the increased depth, which is attended with additional expense because of the great tidal variations.

Hydraulic excavation in the channel below Miraflores Locks was concluded in November, 1912, and the plant reerected at a point north of Gold Hill to sluice the top banks in order to relieve the pressure. Operations began on June 16, and to the close of the fiscal year 57,274 cubic yards of material had been removed, at a division cost of $0.1835 per cubic yard, including an arbitrary of $0.1000 per cubic yard for plant. This work is being performed by the fifth division, chief engineer's office.

There was a total of 771,907 cubic yards of masonry laid in the locks and spillways during the year, as against 1,443,570 cubic yards during the previous year. This is inclusive of masonry laid by the first division in connection with the installation of operating machinery. The costs per cubic yard for the masonry were: Gatun Locks, $7.2794; Gatun spillway, $8.1227; Gatun power house, $8.5739; Pedro Miguel Dam, $5.0240; Pedro Miguel Locks, $7.5976; Miraflores West Dam, $4.3330; Miraflores spillway, $5.8497; Miraflores Locks, $5.6445. Plain concrete shows increased cost over last year in all

projects, except Gatun Locks, due to reduced quantities of concrete laid and to the use of a larger ratio of auxiliary mixers. At Gatun Locks plain concrete shows a decrease of $0.5934, principally in the cost of sand and stone, in the expense for steel forms and in the arbitrary for plant, the decrease in the cost of sand and stone being due to readjustment of stock prices (revised cross-section measurement of the stock piles having shown more stone in storage than was carried on the books), and to securing sand from the borrow pit at Gatun instead of from Nombre de Dios. At Miraflores Locks plain concrete shows an increase of $0.4406 per cubic yard, principally in cement, mixing, wood forms, and placing. Fluctuations in the cost of reenforced concrete are due to the different classes of reenforced concrete laid during the two years.

The dam at Gatun was increased by 1,714,367 cubic yards of dry fill at a division cost of $0.3755 per cubic yard, and 169,114 cubic yards of hydraulic fill at a division cost of $0.2654 per cubic yard. At the close of the year there were in place at Gatun Dam 11,578,268 cubic yards of dry fill at a cost of $0.4063 per cubic yard, and 10,124,082 cubic yards of hydraulic fill at a cost of $0.2933 per cubic yard.

During the fiscal year 1913 no filling for the Colon Breakwater was secured from Toro Point; 183,762 cubic yards of large rock secured from Porto Bello quarry were placed in the breakwater at an average division cost of $4.8250 per cubic yard. This yardage is the volume of rock in the bank. Last year 65,133 cubic yards of this rock were placed in the breakwater at a division cost of $4.3064 per cubic yard.

The Ancon quarry alone was operated during the fiscal year and produced 688,301 cubic yards of crushed stone at an average cost of $0.7795 delivered in storage. To the close of the fiscal year this quarry had produced 2,558,578 cubic yards of crushed rock at an average cost of $0.8572 per cubic yard delivered in storage. The Porto Bello quarry, which began operations in March, 1909, and closed down in April, 1912, produced 1,921,929 cubic yards of crushed rock at an average cost of $2.4337 per cubic yard delivered in storage. There was secured from the Chamé sand pit 445,658 cubic yards of sand at an average cost of $0.7111 per cubic yard delivered in storage. To the end of the fiscal year there has been secured from this source 1,741,196 cubic yards of sand at an average cost of $0.7666 per cubic yard. From the pit at Nombre de Dios on the Atlantic side, which was opened in March, 1909, and closed in November, 1911, there was secured 785,893 cubic yards of sand at an average division cost of $1.9176 per cubic yard delivered in storage. During the year there was secured from the borrow pit near Gatun dam 43,851 cubic yards of sand at an average cost of $0.5188 per cubic yard.

To the close of the year the following amounts had been expended: On spillway gates and caissons at Gatun, $73,732.22; at Miraflores, $40,625.69. On spillway gate machines and their erection, at Gatun, $91,122.95; at Miraflores. $64,299.22. On lock gates and their erection, at Gatun, $2,225,084.30; at Pedro Miguel, $1,373,537.13; at Miraflores, $1,233,845.37. On fender chains, at Gatun, $3,836.95; at Pedro Miguel, $21.37. On emergency dams, at Gatun, $816,184.77; at

Pedro Miguel, $512,480.47; at Miraflores, $38,803.75. On lock operating machinery, including towing-track system, concrete used in the installation of machines, etc., at Gatun, $2,592,232.64; at Pedro Miguel, $1,361,873.92; at Miraflores, $1,561,817.40. For the towing-track system the following number of linear feet of return track were laid by the construction divisions at the various locks: Gatun, 10,527, average division cost $1.3261; Pedro Miguel, 4,333, average division cost $1.1065; Miraflores, 5,925, average division cost $2.5637; and by the first division at Gatun, 1,449, average division cost $1.9273; at Pedro Miguel, 2,043, average division cost $2.3678; at Miraflores, 1,082, average division cost $0.6085 per linear foot. The number of linear feet of track, with rack installed by the first division, and the average cost per linear foot were: At Gatun, 21,000, average division cost $2.3128; at Pedro Miguel, 12,199, average division cost $2.0180; at Miraflores, 14,137, average division cost $1.2291.

In connection with the erection of operating machinery, installation of towing tracks, and decking, the first division had laid to June 30, 1913, 36,710 cubic yards of concrete as follows: At Gatun locks, 16,706 cubic yards, average division cost $13.4124 per cubic yard; at Pedro Miguel Locks, 10,190 cubic yards, average division cost $12.1460 per cubic yard; at Miraflores locks, 9,814 cubic yards, average division cost $11.3013 per cubic yard.

The total expenditures for aids to navigation to the close of the fiscal year had been $377,041.63.

For the Cristobal terminals $14,488.14 had been expended, and for the terminal facilities at Balboa $1,943,971.09. There had been excavated in preparation of site 412,707 cubic yards of material at an average cost of $0.5620 per cubic yard. In filling, 505,419 cubic yards of material had been used at an average cost of $0.3992 per cubic yard. There had been dredged in preparation of the inner harbor at the latter point 1,771,814 cubic yards at an average cost of $0.1547 per cubic yard. For the main dry dock there had been excavated 145,478 cubic yards of material, and for the coaling station 58,221 cubic yards, at an average cost of $0.8461 per cubic yard. In preparing the foundations for the shops 29,684 cubic yards of material had been removed at an average cost of $1.5607 per cubic yard; 7,787 cubic yards of concrete had been placed at an average cost of $9.2091 per cubic yard; 135,442 linear feet of wood piles and 3,060 linear feet of concrete piles had been driven, at an average cost of $0.4820 and $3.2358 per linear foot, respectively. In constructing the docks 12,435 linear feet of concrete caissons were placed at an average cost, including excavation, of $18.4708 per linear foot.

There had been expended in the preparation of permanent townsites $52,458.77 and in the construction of permanent buildings $55,918.76. In the preparation of foundations for the administration building 38,073 cubic yards of material had been excavated, at an average cost of $0.5654 per cubic yard, and 770 cubic yards of concrete had been laid in the foundations at an average cost of $12.8646 per cubic yard.

The amount paid for salaries of clerks and supervisory forces during the fiscal year was 19.75 per cent of the total amount disbursed for salaries. Last year it was 20.55 per cent, indicating a saving in clerical and supervisory forces of about $185,000.

QUARTERMASTER'S DEPARTMENT.

The quartermaster's department is charged with the recruitment of labor; care, furnishing, and assignment of quarters; distributing fuel, commissary supplies, and distilled water; construction and repair of all buildings; requisitioning for supplies of all kinds, together with the receipt and distribution of them on arrival; cutting of grass and disposal of night soil and garbage as prescribed by the sanitary department; and the auditing of all property returns. The department was in charge of Brig. Gen. C. A. Devol, United States Army, until April 17, 1913, when, on account of ill health, it was necessary for him to relinquish his position with the commission. On May 27, 1913, Capt. R. E. Wood, United States Army, was appointed chief quartermaster and continued in charge for the rest of the year.

The force employed increased steadily during the first nine months of the year, until on March 26 the number reached the highest point in the history of the canal work; on that date the effective working force was 44,733, of which 39,089 were on the pay rolls of the commission and the Panama Railroad and 5,644 on the pay rolls of the contractors handling the work on the lock gates, emergency dams, and other contracts in connection with the work. The force fluctuated between 34,957 on June 30, 1912, to the maximum on the date specified, and numbered 43,350 at the close of the fiscal year. In December, 1912, it became necessary to recruit laborers, and 528 were received from Barbados during January and February, 1913. There was a decided decrease in immigration to the Isthmus as compared with previous years, the excess of arrivals over departures amounting to but 3,510. The average number of American employees on the rolls of the commission during the year was 4,340 and on the rolls of the Panama Railroad 870, or a total of 5,110. During the same period there were 2,495 separations from the service of the commission. 1,010 persons employed in the United States and 1,331 employed on the Isthmus, indicating that more than 57 per cent of the gold force was changed.

The commission has 2,618 buildings in the Canal Zone, of which 1,856 were constructed by the Americans and 762 by the French. This is a decrease of 121 from the total of the preceding year. The buildings located at Nombre de Dios, which had been abandoned when this locality ceased to be used as a source of sand supply, were sold. In addition, 122 were demolished and 4 blown down or destroyed by fire. Those demolished were located at Bas Obispo, Culebra, Balboa, and Naos Island, and the destruction was necessary by reason of the work or on account of slides. Those demolished were small and of no value. New construction during the year was less than at any previous time; 20 new buildings were put up and 15 additions made to existing ones. The buildings were small and only two cost over $2,000. The additions as a rule were chargeable to the Hotel Tivoli. Due to the slides at Culebra and the necessity of transferring buildings from Gorgona and old Balboa, the work of removal and reconstruction was on a large scale. Sixty-two buildings were taken down in sections and reconstructed in new locations. The cost of the completed work amounted to $142,000, not including buildings in the course of reconstruction on June 30, 1913, on which $33,000 had already been expended. Up to April 1 the new con-

struction, moving, and part of the maintenance work were handled by five traveling gangs of carpenters. All the American buildings in Gorgona had to be removed and reerected by September 1, 1913, so that nine new gangs were formed in order to complete this work on schedule time. The average cost of taking the buildings down in sections and reconstructing them in new locations during the year was a trifle less than one-third the original cost of the buildings, or a saving over the cost of similar work done during the previous year. It was found on reerection that the buildings were fully equal in value to the original investment, as all unsound lumber was replaced, new plumbing connections put in, and the houses entirely repainted.

On June 30, 1913, there were 23,184 men, women, and children occupying commission quarters, practically the same as during the previous year. Of these, 9,173 were in gold quarters, 4,295 were in European quarters, and 9,716 were in West Indian quarters. Over 90 per cent of the American and European employees occupy commission quarters, but less than 25 per cent of the West Indians take advantage of them. The problem of housing employees properly was a difficult one. Because of the opening up of the terminal work there was a congestion, especially in bachelor quarters, in this territory. To meet the conditions it was necessary to move and reerect a large number of houses for use as quarters. The demolition of the old settlements of Balboa and Gorgona complicated the situation. In moving Gorgona it was necessary to care for 200 American families, 600 American bachelors, and several hundred West Indians who occupied commission quarters, and these were provided for at other points. This movement began in March and was almost completed at the close of the year.

The value of material received from the United States during the year was greater than for any preceding year; it amounted to $13,980,071, not including $2,535,860 paid to the McClintic-Marshall Construction Co. or the value of local purchases on the Isthmus amounting to $2,733,867. The consumption of cement decreased from 1,600,000 barrels in 1912 to 1,200,000 barrels in 1913; the total consumption to date amounted to 5,797,910 barrels. During the year all cement was purchased in sacks, of which 33,475,408 were received and 29,882,968 were returned to the United States; of those returned, 269,775 sacks were rejected, or less than 1 per cent of those returned. The consumption of lumber was approximately 27,000,000 feet board measure, about the same as the preceding year, and the total receipts of lumber since the inception of the work have been 231,000,000 feet board measure. The stock on hand at all storehouses on June 30 amounted to $3,436,995, a decrease of $284,217 from the stock on hand June 30, 1912. The actual reduction was greater than the net decrease would indicate, as approximately $638,000 worth of material was returned to stock by the various divisions. The problem of supply was especially difficult during the year. As the work draws to completion it is considered advisable to keep the stock on hand at as low a figure as possible and operate on a close margin. This necessitates sending a large number of rush and cable orders, increasing the work of the supply department on the Isthmus and of the purchasing agency in the United States. It is hoped that the spare parts now in stock can be worked off, particularly car, steam shovel, and locomotive repair parts, before final completion of the work.

Under the contract for the sale and removal of the French scrap on the Isthmus, entered into in September, 1911, 21,730 tons were collected from points along the line and shipped to the storage yard at Cristobal. The purchase price was $215,000. The time allotted for the removal of the material was three years; almost two years have elapsed and the commission has received but $13,473. A contract was entered into with the Chicago House Wrecking Co. covering all American iron and steel scrap already accumulated or that would accumulate during the fiscal year. This scrap totaled 12,109 tons. Payment was to be made on ship's bill of lading as shipped from the Isthmus; the commission has received only $18,571, as but 2,466 tons have been shipped. The sale of scrap screenings removed from buildings netted $6,866 and scrap rope and hose were sold to the value of $4,693. Approximately $75,000 were realized from the sale of copper and brass scrap that had accumulated in the operation of the Gorgona brass foundry.

Besides the regular issues to departments and divisions of the commission and the Panama Railroad a number of sales were made to employees, contractors, private individuals, and companies, the total amount aggregating $106,037.77. The value of stock on hand at the obsolete storehouse on June 30 was $431,916, an increase of $70,000 over the total on hand at the close of the previous fiscal year. Invitations for bids were issued offering for sale a large amount of material in the obsolete storehouse on February 23, 1912; of the 24 classes advertised awards were made on but 6, as either no bids were received on the other classes or the bids were below the upset price of the material. Under the circular issued on February 1, 1913, satisfactory bids were received on only four of the 27 classes advertised. Results from these sales demonstrate that this method of sale of the entire equipment and material is not satisfactory. Firms or contractors desiring material buy only when they need it, and their necessities may not coincide with the particular time when advertisement is made, so that only the scrap dealer or middleman is benefited. It is believed that best results would be obtained by placing a fair upset price on such material and equipment and selling it when opportunity offers. A board of appraisal was appointed to place values on all articles that may be offered for sale. Under this arrangement equipment to the value of $32,000 was sold and paid for. In addition, $18,670 worth of equipment so appraised was sold to the United Fruit Co. in June, 1913, but delivery has not yet been effected.

The quartermaster's department attends to all purchases on the Isthmus, and the amount expended aggregated $2,733,867, of which $1,492,322.52 were for the purchase of coal from the Panama Railroad Co., $995,408.92 for the purchase of crude oil from the Union Oil Co., and $223,208.26 for miscellaneous purchases from the Panama Railroad Co., leaving $22,672.81 for the purchase of miscellaneous supplies from local merchants. The balance was used for postage stamps.

The work done for the sanitary department, consisting of grass and brush cutting, disposal of night soil and garbage, continued as heretofore. All grass was cut on request from the sanitary department. The total amount cut was 7,356 acres, of which 4,822 acres were cut by scythe, at an average cost of $9.05 per acre, and 2,534

acres by horse mower, at an average cost of $1.77 per acre. The area covered by this sanitary work was approximately 2,980 acres. The cost of the sanitary work done by the quartermaster's department amounted to $125,983.21.

The supply of animal transportation was inadequate to meet the demands, and 50 mules were purchased at a cost of $10,562, reaching the Isthmus May 26. These scarcely replaced the animals which were condemned or which died during the year. Six horses and 20 mules were condemned and destroyed and 5 horses and 4 mules died, a total of 35 animals.

SUBSISTENCE DEPARTMENT.

The subsistence department is charged with the operation of the Isthmian Canal Commission hotels, messes, and kitchens, and is in charge of Lieut. Col. Eugene T. Wilson, United States Army, as subsistence officer.

On June 30, 1913, the department was operating the Hotel Tivoli, 17 line hotels, 3 night restaurants, 15 European laborers' messes, and 16 common laborers' kitchens—a decrease of 2 hotels, 3 messes, and 2 kitchens from last year. The hotel at Balboa was closed on July 16 and consolidated with the one at East Balboa. The hotel near the spillway at Gatun was closed March 31, and the messes at Cerro, Haut Obispo, Gatun (No. 68), and Naos Island were closed during the year, and one at Bas Obispo opened. A new kitchen was also opened at Bas Obispo, while those at Ancon, Cerro, and Haut Obispo were closed. The total revenue from the line hotels, restaurants, messes, and kitchens was $1,235,077.84, a decrease of $28,791.97 from last year, while the total cost of operations was $1,205,800.76, a decrease of $20,551.40, making the profit $29,277.08, a decrease of $8,240.57 from that of last year. The total number of meals served in line hotels was 2,340,644, an increase of 265,309 over last year. The total number of rations served in European laborers' messes was 935,516, or 172,659 less than last year. The total number of rations served in common laborers' kitchens was 461,456, a decrease from last year of 123,001. The net expense for salaries and wages was $166,398.65, an increase of $4,391.88 as compared with the previous fiscal year. As the result of the year's operations the line hotels and restaurants showed a loss of $3,837.71, an increase of $8,247.66 over last year; European laborers' messes showed a profit of $26,845.24, a decrease of $11,610.54, and common laborers' kitchens showed a profit of $6,269.55, a dcrease of $4,877.69.

A laundry was installed in the Hotel Tivoli to handle guests' work, and was opened in December, 1912. The hotel was operated at a profit of $76,256.55.

EXAMINATION OF ACCOUNTS AND DISBURSEMENTS.

EXAMINATION OF ACCOUNTS.

The duties of the examiner of accounts were outlined in detail in the annual report of 1909 and continued with but little change during the year just ended. The department is in charge of Mr. H. A. A. Smith.

In the legislative, executive, and judicial appropriation act approved August 23, 1912, a provision was inserted relative to the ad-

ministrative examination of public accounts and stated that "disbursing officers shall make only such examination of vouchers as may be necessary to ascertain whether they represent legal claims against the United States." After discussing the meaning of this provision with the Committee on Appropriations of the House, instructions were issued, effective May 1, 1913, by which the greater part of the detail check made by the disbursing officer of every voucher, pay roll and pay receipt was discontinued, and the responsibility formerly carried by the clerks of the disbursing office for such check was transferred to the clerks in the pay roll and voucher division of the examiner of accounts' office.

Effective January 1, 1913, the timekeeping division was organized by consolidating the work of preparing time and pay rolls for various departments and divisions, and continued under this department until July 1, 1913, when, with the approval of the Secretary of War, it was transferred to the fourth division of the chief engineer's office.

The only change made in the accounting system during the year was the extension of the classified expenditure accounts to provide for new operations, including the construction of new buildings, the electric transmission line, and clearing the lake, and a further separation of the accounts for the construction and maintenance of waterworks and sewers to care for the permanent water supply. The material and supply account was closed at the end of the year and a new account opened which is designed to provide a more exact record of material and supplies on hand and issued. The continuance of the method of absorbing plant and equipment charges resulted in distributing plant charges to the amount of $27,550,635.24 to the construction divisions to June 30, 1913, leaving a balance to be absorbed on that date of $1,941,488.61. As far as appeared practicable, cash payments for materials and supplies furnished and services rendered was adopted during the year. The work involved in the collection of money due the commission from employees and others was considerably reduced and the liability of loss due to giving credit was removed.

Under the agreement with the Republic of Panama for reimbusing the United States for expenditures incurred in connection with the construction and maintenance of waterworks, sewers, and pavements in the cities of Panama and Colon, the total amount expended in the city of Panama was $1,626,267.58, and in the city of Colon $1,550,030.46, or a total of $3,176,298.04, including accrued interest to date at the rate of 2 per cent per annum. This interest has aggregated $270,733.72. At the close of the fiscal year $975,439.71 has been reimbursed. Included in this amount is $32,785.01, representing the value of water used by the commission in the two cities.

The duty of purchasing and issuing commissary coupon books was transferred to the Panama Railroad Co., but, as the method continued of issuing coupon books to employees of the commission and making collections therefor by deductions on the pay roll, the work of the department was reduced but little; 60,790 hotel books and 1,363,100 meal tickets were issued, for which collections were made on the pay rolls. In addition, $3,235,122 worth of commissary books were issued and collected on the pay rolls.

The administrative examination of the disbursing officer's accounts was made monthly, and the periodical examination of all fiscal

officers' records of financial transactions and the auditing of their accounts were continued, involving a complete check of the records and cash and cash values in the hands of over 200 financially responsible officers. There were passed to the disbursing officer for payment audited vouchers amounting to $9,022,000 and pay rolls amounting to approximately $20,700,000. At the close of business on June 30 there were unaudited claims on hand amounting to $57,197, the greater portion of which were in favor of the Panama Railroad Co. The force assigned to the inspection of time books and the work of timekeepers in the field was reduced, due partly to reduction in operations at certain points and partly to cooperation between departments and divisions. A few cases of padded time books were discovered toward the end of the year and five or six negro timekeepers, foremen, and laborers were convicted.

Under the provisions of the injury compensation act of May 30, 1908, as amended by section 5 of the act of March 4, 1911, 1,809 claims for compensation on account of injuries received in the course of employment were filed during the year, and 41 claims were filed on account of deaths—a total of 1,850; of these, 1,452 claims for injuries were allowed, and 130 were disallowed for the reason that the employees claiming compensation were incapacitated for less than 15 days, in which cases payments were made as meritorious sick leave under the act of February 24, 1909; in addition to these, 185 claims, including 25 claims pending from the previous year, were disallowed for some one of the following reasons: On account of negligence and misconduct of the employees; because the employees were not in course of employment, or not employees of the commission; because the accident described was not the cause of incapacity; because of lack of sufficient evidence to establish connection between the alleged injury and the incapacity; and because of failure to secure proper medical treatment. Of the death claims 21 were allowed, while 8 were disallowed for the reason that in 6 of them the claimants were not considered dependent parents within the meaning of the act, and in 2 of them death was due to negligence. Under the act of February 24, 1909, authorizing meritorious sick leave to injured employees for not exceeding 30 days in any one year, 4,715 cases were allowed. The average duration of disability of cases for which injury compensation claims were filed was 58 days, whereas in meritorious sick leave cases the average duration was 5 days. The total amount expended during the year in settlement of these claims was $224,071.72, making a total from August 1, 1909, to June 30, 1913, of $915,824.79.

Congress has appropriated a total of $349,505,223.14 for canal construction, including appropriations contained in the act of June 23, 1913. Of this amount, $10,676,950 were for fortifications, of which $4,870,000 were appropriated by the act of June 23, 1913, and $21,411.56 were for the relief of private persons. The balance, $338,806,861.58, including $16,265,393 appropriated by the act of June 23, 1913, was appropriated for the construction of the canal and is a charge against the total authorized bond issue of $375,200,900. This leaves available for appropriation a balance of $36,394,038.42. The actual cash balance on hand June 30, 1913, for the construction of the canal, excluding the amount available for fortifications, was $20,673,904.79. Up to June 30, 1913, $5,856,838.35 were collected and

returned to the Treasury as miscellaneous receipts. This item represents the total amount appropriated by Congress which, after being used for miscellaneous purposes in connection with the canal work, was covered back into the Treasury and lost to canal appropriations.

The examiner of accounts is also auditor for the Canal Zone government. He receives, examines, and settles all accounts pertaining to the revenues of the Canal Zone government and expenditures therefrom. The amount of revenues derived from rentals and taxation decreased from $259,759.68 in 1912 to $212,266.83 in 1913. The disbursement of Canal Zone revenues increased from $214,000 in 1912 to $233,000 in 1913, the increase being principally due to sanitary work in native villages and increased expenditure for maintenance of Canal Zone roads and trails.

DISBURSEMENTS.

The work of this department embraces the securing of and disbursing the necessary funds and the accounting for all moneys paid out or collected, as well as the issuance of hotel and commissary books and meal tickets to the various departments of the commission. It was in charge of Mr. E. J. Williams, disbursing officer.

The total amount paid out by the disbursing officer on pay rolls aggregated $20,524,705.75, in addition to which $9,035,630.18 were paid out in settlement of public bills and on reimbursement vouchers. The value of hotel books, commissary books, and meal tickets issued totaled $1,305,405.

DEPARTMENTS OF CIVIL ADMINISTRATION AND LAW.

CIVIL ADMINISTRATION.

The organization of the department of civil administration remained substantially as described in former annual reports and continued in charge of Mr. Maurice H. Thatcher until June 14, 1913, when he entered on leave of absence, at the expiration of which his services were terminated by resignation.

Seven acts of Congress and four joint resolutions affecting the Panama Canal and the Canal Zone were enacted during the year, the most important being the Panama Canal act, approved August 24, 1912, providing for the opening, maintenance, protection, and operation of the Panama Canal and the sanitation and government of the Canal Zone. Four ordinances were enacted by the Isthmian Canal Commission and approved by the Secretary of War, the most important of which amended certain of the rules governing the navigation of the Panama Canal and the approaches thereto. At a meeting of the commission held April 24, 1913, a resolution was adopted that no further licenses be granted for the sale of intoxicating liquors on the Canal Zone.

Negotiations carried on with the officials of the Republic of Panama included the following subjects: Arrest by Panamanian police of commission employees while engaged in the performance of their duties in the cities of Colon and Panama; the reciprocal licensing of carts and wagons used in the transportation of merchandise in the Republic and the Canal Zone; municipal and sanitary improvements in Colon and Panama; the superior right of the United States under the treaty to use the rivers and streams of the Republic; the deporta-

tion to the Republic of ex-convicts who have served terms of imprisonment in the Canal Zone; the admission of merchandise shipments consigned to the commission, the Marine Corps, the Tenth Infantry, and the wireless stations, without the intervention of Panamanian customs officials; delay in customs release covering shipments consigned to commission and Panama Railroad employees; collection of customs duties on parcel-post packages coming through the post offices of the Canal Zone; establishment of a uniform schedule of rates to be charged for transporting passengers by automobile between points in the Canal Zone and the cities of Colon and Panama; the collection of a tax by Panama upon steamship tickets covering passage to foreign ports; and the tax upon steamship agencies doing business in the Canal Zone and in the Republic of Panama. The relations of the commission with the Republic of Panama and with foreign representatives continued satisfactory.

During the year the board of local inspectors issued 88 licenses to pilots; 41 to masters, 19 of which were issued as joint master-pilot licenses; 22 to mates; and 58 to engineers—a total of 209 licenses. Under the provisions of the Executipe order of July 21, 1911, certificates were issued to 94 vessels, of which 18 were over 100 gross tons burden. One hundred and sixty-two licenses as navigators of motor boats were granted. Licenses were also issued to 120 chauffeurs.

Postage sales for the fiscal year amounted to $100,804.38, an increase of $13,109.97 over the previous year. There were 160,742 registered letters and parcels handled, of which 41 per cent was official matter. Money orders to the number of 238,316, having a total value of $4,883,624.13, were issued, on which the fees amounted to $23,347.12. Of the money orders issued during the year, orders amounting to $3,917,899.30 were made payable without and $965,724.83 within the limits of the Canal Zone. At the close of the fiscal year there was on deposit in the postal savings banks a total of $645,690. There were in the post offices of the Canal Zone on the same date unpaid money orders aggregating $156,928, drawn to the order of the remitters and payable at the offices of issue.

During the year 281 vessels entered the port of Ancon, with a total tonnage of 553,767, and 283 vessels cleared, with a total tonnage of 556,306. At Cristobal 280 vessels entered, with a tonnage of 849,702, and 283 vessels cleared, with a tonnage of 858,703.

On June 30, 1913, there were in force 319 leases, of which 312 were for building lots, 1 for land, and 6 for buildings. Rents collected during the year amounted to $4,792.95. A total of $53,855.95 was collected from general taxes and licenses; of this amount, $9,130.55 were for distillation taxes, $43,800 for licenses for the sale of liquor at retail, $1,180.38 for license fees from insurance companies doing business in the Canal Zone, and $2,240.50 for licenses for motor vehicles.

During the year 470 estates were settled, and on June 30, 1913, there were 78 estates in the course of settlement. The money handled on account of the administration of estates was $30,124.24.

A reorganization of the division of police and prisons was effected on September 1, 1912, as a result of which the authorized strength of the force was reduced from 274 to 247. There were 6,827 arrests made, of which number 6,079 were males and 748 females. Of the total number of persons arrested 77 per cent were convicted. On

June 30, 1913, there were 133 convicts confined in the penitentiary; practically all of these were kept at work on the public roads, and the value of their work was $26,561.75. The cost of guarding, subsisting, and clothing the convicts was $30,178.23. The stockade on the Mandingo River was closed during the year and all convicts were transferred to a new stockade erected near Gamboa bridge; the prisoners will be housed here during the construction of the wagon road leading from Gamboa to connect with the Panama-Empire Road.

Although no change was made in the authorized strength of the division of fire protection, there was actually a reduction of 15 men as compared with the number in service at the close of the previous year; the reduction was made necessary by a cut in the appropriations for the department. Purchase of two automobile fire engines, mentioned in the last annual report, made possible the discontinuance of the one-man stations at Balboa and Mount Hope, the consolidation of the two Ancon stations, and the sale of six fire horses. All fire equipment installed in the buildings at Gorgona was removed upon the abandonment of that settlement and most of it has been installed in the buildings reconstructed at Corozal and Balboa. There were 220 alarms of fire responded to, 18 of which were false. Of the 202 fires, 1 was in the city of Panama and 7 in the city of Colon; 104 were in Government property and 20 in property of the Panama Railroad Co. The value of Government and railroad property involved was reported to be $834,077.44; the total loss was estimated at $12,173.77 for Government property and $501.75 for the property of the Panama Railroad Co. The largest and most serious fire in the Canal Zone occurred at Toro Point, causing a loss to the commission of $11,326.98. The year's fires resulted in five injuries from burns; no loss of life occurred.

The authorized organization of the division of public works remained unchanged throughout the year, although the deficiency in the department's appropriations made it necessary to dispense with two inspectors. All municipal improvements in the city of Panama undertaken under the appropriation of $800,000 which were completed were turned over to this division for maintenance. On June 30, 1913, 2,101 water connections had been made in the city of Panama and on that date 22 applications were pending. The collections of water rents from private consumers for the first three quarters of the year in the city of Panama were $81,727.75, and bills rendered for the last quarter aggregated $32,583.75. For the first three quarters of the year the water collections exceeded requirements by $13,219.69, which was applied to the reduction of the cost of waterworks, sewers, and pavements. In the city of Colon 866 connections had been made with water mains and on that date there were 55 applications pending. Collections in Colon from private consumers and from the commission and Panama Railroad Co. during the first three quarters amounted to $64,058.15, and the net amount of bills rendered for the fourth quarter was $24,168.80. For the city of Colon the Republic of Panama paid $9,675.05 in order to liquidate its proportionate share of the cost of water, sewer, and street systems for the first three quarters of the fiscal year. In the Canal Zone 695 water connections have been made. From the eight public markets in operation during the year a revenue of $3,805.50 was derived in rent.

The organization of the division of schools consisted of 1 superintendent, 1 supervisor of upper grades and high schools, 1 supervisor of primary grades, 2 clerks, 2 supervisors of children, 1 principal of high school, 6 principals of grammar schools, and 72 teachers. The school year opened October 1, 1912, with an enrollment of 2,199 children—1,157 whites and 1,042 blacks. At the close of the fiscal year 29 school buildings were in use—14 for whites and 15 for blacks. Medical inspection of all pupils was continued and 1,044 pupils were treated during the school year.

The supreme court held 26 sessions during the year. It affirmed decisions of the circuit courts in two and reversed the decisions of those courts in two criminal cases. At the beginning of the year two civil cases were pending in the supreme court, 22 were filed, and 18 were disposed of. In the circuit courts, 533 criminal cases were instituted, out of which number there were 369 convictions, 93 acquitals, and 67 dismissals, leaving 4 cases pending at the close of the year. There were 585 civil actions brought, 750 of which were settled and 108 pending on June 30, 1913.

At the beginning of the fiscal year there were $259,102.16 in the Zone Treasury, and during the year collections amounted to $336,603.33. Expenditures for the year totaled $374,868.04.

DEPARTMENT OF LAW.

The department continued in charge of Judge Frank Feuille and the duties are as outlined in previous annual reports.

In anticipation of the inundation of the Gatun Lake area, a number of towns along the line of the old Panama Railroad between Gorgona and Gatun were cleared of their population; as a result, the administrative district of Gorgona was abolished and its territory added to the district of Empire for judicial, administrative, and political purposes, by an Executive order issued September 2, 1912, The order also abolished the office of senior district judge and reduced the number of district judges to 3.

The Panama Canal act, approved August 24, 1912, authorized the President to declare that all land and land under water within the limits of the Canal Zone are necessary for the construction, maintenance, operation, sanitation, and protection of the Panama Canal. Pursuant to these provisions an Executive order was issued under date of December 5, 1912, directing that all land and land under water within the limits of the Canal Zone be taken possession of on behalf of the United States and to extinguish, by agreement when practicable, all claims and titles of adverse claimants to the occupancy of land and land under water. Due to the additional work that was thrown upon the department by reason of this order, and also for the purpose of representing the United States before the joint land commission which had been appointed in compliance with the provisions of the treaty, the personnel of the department was increased by one clerk and a land inspector during the latter part of the fiscal year. As negotiations have been pending between the United States and the Republic of Panama for the exchange of lands known as Las Sabanas, lying contiguous to the city of Panama, in the Canal Zone, for certain harbor areas in the city of Colon, an Executive order of February 18, 1913, was issued, modifying the provisions of

the Executive order of December 5, 1912, exempting privately owned lands in the territory under negotiation from being acquired by the United States. On March 19, 1913, an Executive order was issued protecting from wanton killing or injury the birds of the Canal Zone. By Executive order of March 20, 1913, amending the Executive order of February 5, 1912, the collector of revenues was authorized to administer upon estates which consisted of personal property only, regardless of the value of the estates, the maximum value previously fixed being $1,000. Under existing law, therefore, the estates of deceased or insane employees of the Canal Commission, the Canal Zone government, and the Panama Railroad Co. are administered by the collector of revenues free of cost. The actions of the collector are subject to the supervision and approval of the Circuit Court of the First Judicial Circuit of the Canal Zone.

Complaints had been made from time to time that the agents of foreign corporations whose financial condition was doubtful were doing business in the Canal Zone, to the exploitation of our employees. To prevent this as far as possible an Executive order was issued on March 20, 1913, requiring foreign corporations or joint stock companies to file their articles of incorporation with the collector of revenues for the Canal Zone, together with such information as will enable the collector of revenues to base a conclusion as to the solvency of the concern. In addition to this, foreign corporations are required to file authorization with the collector of revenues to represent them in all suits and legal proceedings in the Canal Zone, and to pay an annual tax of $50. The order has had a salutary effect in keeping out undesirable concerns.

On April 15, 1913, maritime quarantine regulations for the Canal Zone and the harbors of the cities of Panama and Colon in the Republic of Panama were established by Executive order, the regulations to take effect upon the date on which the Panama Canal is officially and formally opened for use and operation by proclamation of the President of the United States. The regulations were promulgated in advance in order that shipping interests and the traveling public may have information in regard to the quarantine requirements of the canal and the Canal Zone.

Due to the fact that the prosecuting attorney devoted his time almost exclusively to the adjustment of land claims, especially those coming before the joint land commission, the prosecution of all criminal cases was conducted by the assistant prosecuting attorney and 621 criminal cases were disposed of in the three circuits; of the total number of defendants tried, 449 were convicted, 111 were acquitted, the charges against 54 were dismissed, and in 7 cases the defendants are fugitives from justice. One disbarment proceeding was brought in the supreme court against an attorney of the Canal Zone, and the defendant was disbarred from practice in the Zone courts.

A total of $27,606.50 was paid by the commission in settlement of claims presented by squatters and occupants of Zone lands. Several tracts of land were acquired from private persons by deed. In addition to the above, quitclaim deeds were obtained for the United States for holdings at Santa Isabel, El Encanto, Victoriano, and Paja. On March 31, 1913, all unexpired Canal Commission leases for building lots and agricultural property were terminated; on that date there

were 174 leases, covering 99 hectares of agricultural land and 108 building lots, which would have remained in force until June 30, 1913, had it not been for the order of cancellation.

Revocable licenses to the number of 312, covering 347 building lots, were in force on June 30, 1913, calling for an annual rental of $2,816.96.

DEPARTMENT OF SANITATION.

This department has charge of sanitary work in the cities of Colon and Panama and of oiling ditches and other water in the Canal Zone. It designates the remaining sanitary work to be done in the Canal Zone and exercises such supervision as may be necessary to insure proper performance of the work. In addition, the department has charge of the hospitals and quarantine. It is in charge of Col. William C. Gorgas, United States Army, as chief sanitary officer.

The work in the terminal cities consists in cutting grass and brush, oiling pools, constructing and maintaining ditches for drainage purposes, removal of garbage and night soil, fumigation, and street cleaning. On account of the juxtaposition of Cristobal, Mount Hope, and Toro Point to Colon these are included in the Colon area, and for the same reason Ancon Hospital grounds are included with Panama. According to the report submitted, the work done in Panama consisted in cleaning 200 miles of ditches, digging 1.2 miles of ditches, and clearing 114 acres of weeds and grass, in addition to filling and cleaning cesspools and wells, oiling, disinfecting, and fumigating. In the Colon district, from the same source, 72 miles of ditches were maintained, 77 miles of ditches were constructed, and 29 acres were cleared of vegetation, in addition to oiling, disinfecting, and fumigating.

The total expense for sanitary work in the Canal Zone and in the cities of Panama and Colon was $510,529.17, of which $62,955.06 was for sanitation proper in the two cities, $371,844.90 for sanitation proper in the Zone, $10,627.60 for removal of garbage and street cleaning in the two cities, and $65,101.61 for removal of garbage and street cleaning in the Zone. Of the amount expended for sanitation proper in the Zone the construction divisions expended $91,877.98, principally in the maintenance of existing ditches and the construction of new ones for drainage purposes; the quartermaster's department, $50,533.13 for grass and brush cutting. The sanitary department used in the Zone 674,662 gallons of oil, costing $17,669.69, and 120,992 gallons of larvacide, costing $21,759.96; the labor expense for distributing was $21,320.39 and $19,567.39, respectively. All work performed by the construction divisions and the quartermaster's department was done under the direction of the sanitary department. The removal of garbage and night soil in the Zone was done by the quartermaster's department.

Admissions to hospitals and sick camps during the year, including those sick in quarters, totaled 33,779; the daily average number of employees sick was 19.04 out of every thousand, as against 22.91 for 1911–12 and 24.77 for 1910–11—this on the basis that the total numbers employed during the years mentioned were 54,000, 50,008, and 49,129, respectively. The total number of deaths among employees was 483, of which 36 were Americans, 58 were white employees of other nationalities, and 389 were blacks. The total number of deaths

from violence among all employees was 164, as against 154 for the preceding year. In addition, on the recommendation of the medical examining board, 183 deportations were made—134 for disease and 49 on account of injuries.

RECREATION OF EMPLOYEES.

On June 30, 1913, clubhouses were in operation at Corozal, Empire, Gorgona, Gatun, and Cristobal in the Canal Zone, and at Porto Bello, about 20 miles down the Atlantic coast.

The clubhouse at Culebra was removed because of slides and a portion of the building was reerected at the rear of the administration building annex at a cost of about $1,700, paid from clubhouse funds. Bowling alleys, pool and billiard tables, soda fountain, barber shop, and a reading room were thus provided in this new location. Entertainments were given in the second story of the schoolhouse.

The average monthly membership for the year was 2,023, as against 1,944 for the previous year. The largest membership for any given month was 2,127, the largest since organization.

The total expenditures from commission funds for the support of these clubhouses aggregated $49,925.96.

* * * * * * *

GENERAL REMARKS.

Since the submission of the last annual report the concrete work of the locks has been completed, and but for slides which developed excavation in the central division would also have been finished. In the last annual report the completion of the canal by the close of the fiscal year was predicated on the completion of the lock gates by the contractor and the slides. As already noted, the contract for the completion of the gates has been extended and contemplates finishing up all work on one flight throughout by October 1, 1913. Work on the installation of the operating machinery was concentrated so as to meet this condition of the lock gates, and it is believed that one flight of locks throughout will be ready for operation October 1, 1913, except the fender chains and the control houses, but electrical current from existing power plants will be usable until the completion of the hydroelectric station. Assuming the lake level at elevation 50, July 1, with an average rainy season the lake should reach elevation 85 by December 1, 1913. The rainfall during the month of May was excessive and above the average; the rainfall during July was below the average, so that the lake has not reached the elevation that it should have at this time by about 3½ feet.

The slides which occurred to prevent completion of the Cut as anticipated a year ago are at Cucaracha, the east side opposite Culebra, two in the vicinity of the Empire suspension bridge, relatively small, and one opposite Whitehouse. With the exception of the Cucaracha slide, these could probably be removed in the dry by January 1, 1914, but the removal of Cucaracha slide in the dry would require until April, 1914. The material can not be handled expeditiously by steam shovels during the wet season, but lends itself to economical removal by hydraulic dredges. Except at Cucaracha, the existing channel by the slides is to full depth and of a width of at least 200 feet at the bottom. Assuming that all the slides were removed by

steam shovels in the dry, the water in the lake could not be raised above elevation 60 and still be kept out of the Cut by the dike at Gamboa, so that after the advent of the dry season it would not be possible, under normal conditions, to secure full lake level until October or November, 1914. The material in all the slides can be handled advantageously by the dredging fleet augmented as it will be later by the two 15-yard dipper dredges under contract. They will operate against banks in every case and will not be excavating for the full depth of 45 feet. The sea level sections by the time the dredges can be moved into the Cut will be in condition for the passage of ships of the heaviest draft.

It has been the general belief that the effect of the water in the Cut would tend to retard slides and the experience below the Gatun locks in the sustaining power of water against slides fully justifies this belief; on the other hand, the geologist is of the opinion that the water may to some extent develop new slides. Again, much ado was made in 1909 over the seamy character of rock on the Isthmus, through which water flows quite rapidly, in consequence of which the question was raised that the lake might leak out through seams and crevices. If these things are liable to occur, the sooner the better, if the official opening of the canal is to occur January 1, 1915; for if water were not admitted this fall but were deferred until May 1, 1914, the full height could not be reached until October, 1914, leaving little time for the determination of these questions. These considerations led to the conclusion that the water should be turned into the Cut at the earliest date practicable for getting the dredges to work on the slides. Dredges can be passed through into the Cut as soon as the lock gates of one flight are completed, and this is reasonably certain to be the case by October 1. With the average rainfall, the lake should reach elevation approximately 70 by October 10, and a greater height of water against the dike which excludes the lake from the Cut at present would not be safe. The present plans, therefore, are based upon the blowing up of Gamboa Dike on October 10, its removal by dredges immediately thereafter, the transfer of two suction dredges and the ladder dredge *Corozal* to the Cucaracha slide, the smaller dipper dredges to work on the other slides until the full width of the channel is attained, and the passage of vessels through the canal as soon as channels of full depth and of sufficient width have been secured.

An erroneous impression has been caused by the announcement that the water will be turned into the Cut October 10, as it seems to have been assumed that the canal will be practically finished on that date. Before boats can be passed it will be necessary to remove the Gamboa dike by dredges and to remove the slides as already outlined. The passage of commercial vessels is dependent, therefore, upon the time when proper channels can be dredged through the slides; should additional ones occur, they will necessarily advance the date when this will be accomplished.

Respectfully submitted.

GEO. W. GOETHALS,
Colonel, Corps of Engineers, United States Army,
Chairman and Chief Engineer.

The Hon. LINDLEY M. GARRISON,
Secretary of War, Washington, D. C.

REPORT

OF THE

ATTORNEY GENERAL.

DEPARTMENT OF JUSTICE,
Washington, D. C., December 1, 1913.

To the Senate and House of Representatives of the United States of America in Congress assembled:

I have the honor to submit a report of the business of the Department of Justice during the fiscal year ended June 30, 1913, together with some recommendations for new legislation.

RECOMMENDATIONS.

1. Judges of United States courts, at the age of seventy, after having served 10 years, may retire upon full pay. In the past many judges have availed themselves of this privilege. Some, however, have remained upon the bench long beyond the time when they were capable of adequately discharging their duties, and in consequence the administration of justice has suffered. The power of Congress to correct this condition is limited by the provision of the Constitution that judges shall hold their offices during good behavior. I suggest an act providing when any judge of a Federal court below the Supreme Court fails to avail himself of the privilege of retiring now granted by law, that the President be required, with the advice and consent of the Senate, to appoint another judge, who shall preside over the affairs of the court and have precedence over the older one. This will insure at all times the presence of a judge sufficiently active to discharge promptly and adequately the duties of the court.

2. Clerks of United States courts should be appointed for specified terms by the courts, with the consent and approval of the Attorney General, and be subject to removal by the President for cause at any time. This, I think, would add to the efficiency of the courts and protect them from certain evils disclosed by experience.

3. Provision should be made for a review by the Supreme Court of the final decisions of the Court of Customs Appeals by writs of certiorari, to be granted only upon application of the Government.

4. The annual term of the Court of Claims should be fixed to begin about the first Monday in October of each year, and the court

should not be finally adjourned earlier than the last of June. A vacation of three months seems adequate.

5. The American Bar Association has earnestly approved the bill introduced in the House of Representatives by Mr. Clayton, under which the Supreme Court is given power to promulgate rules in respect of trials on the law side of the Federal courts. Existing conditions, I think, may be greatly improved by the passage of this bill, and I recommend it to your earnest consideration.

6. The efficiency of this department would be greatly improved by certain changes in its organization and by some increases of salaries. It is growing increasingly difficult, indeed it is well-nigh impossible, to obtain and retain the services of lawyers of proper standing and experience to act as assistants for the compensation now provided. At present there is one Assistant to the Attorney General, at $9,000; one Assistant Attorney General in charge of customs matters, at $8,000; and eight Assistant Attorneys General, at $5,000 each. Of the latter, one is assigned to the Post Office Department and is appointed through the Postmaster General; another is assigned to the Interior Department. I think the title of the Assistant Attorney General now assigned to the Post Office and the Interior Department should be changed to Solicitor. The title of the Assistant to the Attorney General should be changed to Assistant Attorney General, and the salaries of all Assistant Attorneys General should be raised to $9,000. These places are exceedingly important from every standpoint and the salaries suggested are moderate for the character and the amount of work to be performed.

7. Attention is again called to the urgent need of a building for the department. Most of those now occupied are not fireproof, are without vaults, and the office records are constantly exposed to destruction by fire. The general housing conditions are so bad that high efficiency is impossible. Section 31 of the public building act approved June 25, 1910, authorized the Secretary of the Treasury to prepare designs and estimates for a separate fireproof building, but did not authorize its construction. A site has been purchased and plans have been prepared. It is recommended that the necessary authority be given immediately to contract for the construction.

ENFORCEMENT OF THE ANTITRUST LAW.

Alleged violations of this law are being constantly reported, and an organization is being perfected through which substantial complaints may be promptly investigated and violations of the act vigorously and speedily dealt with. In this work the services of the several district attorneys will be freely used.

On March 4, 1913, there were pending under this act 52 cases—35 civil, 16 criminal, and 1 contempt proceeding—of which 3 civil, 5

criminal, and the 1 contempt proceeding have since been concluded. Since March 4 last 8 cases have been instituted—5 civil and 3 criminal—and 1 of each class has been concluded. At this time 49 cases are pending, of which 43 were instituted during former administrations and 6 during the present.

Antitrust Cases Decided by the Supreme Court.

Union Pacific-Southern Pacific Merger Case.

This case was decided by the Supreme Court December 2, 1912. It was held (1) that the Union Pacific Railroad Co. and the Southern Pacific Co. are substantial competitors in interstate transportation, (2) that the acquisition by the former of a controlling stock interest in the latter created a combination in restraint of trade, and (3) that such combination would not be effectually dissolved through a transfer by the Union Pacific Co. to its own stockholders of its unlawfully acquired holdings of Southern Pacific stock. (226 U. S., 61, 470.)

Thereupon my predecessor and counsel for the defendants undertook to arrange a dissolution, and agreed upon a plan requiring, among other things, that the Southern Pacific Co. transfer control of the Central Pacific Co. to the Union Pacific Co. This plan was withdrawn, because the California Railroad Commission refused to approve certain of its features, and the negotiations devolved upon me.

After consideration, another plan was worked out, presented to Circuit Judges Sanborn, Hook, and Smith, approved by them at St. Paul on June 30, 1913, and embodied in a decree.

It was insisted for the Government that the dissolution should be effectual, and especially that it should be free from the fundamental defect in the plans adopted in the Standard Oil and Tobacco cases where the separate parts into which the business was divided were left under the control of the same stockholders. Several proposals by the Union Pacific Co. were rejected, because they did not adequately guard against a similar result. The plan finally assented to follows.

1. Of the $126,650,000 of Southern Pacific stock held by it, the Union Pacific Co. was authorized to sell $38,292,400 to the Pennsylvania Railroad Co. in exchange for $42,547,200 of the capital stock of the Baltimore & Ohio Railroad Co. This aided in separating the Southern Pacific from the Union Pacific, and at the same time divested the Pennsylvania Railroad Co. of a large amount of the capital stock of an active competitor—the Baltimore & Ohio Railroad Co.—thereby correcting, without the cost and delay of litigation, another objectionable condition. No new combination in restraint of trade was created by the exchange, since the Pennsylvania and the Southern Pacific systems are noncompetitive, and the same is true of the Union Pacific and Baltimore & Ohio.

2. There was left in the ownership of the Union Pacific Co. $88,357,600 of Southern Pacific stock. This was transferred in trust to the Central Trust Co. of New York—an independent institution—which became a party to the suit and subject to the direction of the court. The trust company was authorized to issue certificates of interest representing this stock and these were offered to Union Pacific stockholders. The holder of such a certificate has no right to vote or receive dividends in respect of the stock; but he may convert it into Southern Pacific stock by making affidavit that he owns no Union Pacific stock and is not acting on behalf of any Union Pacific stockholder, or in concert, agreement, or understanding with anyone to obtain control of the Southern Pacific Co. in the interest of the Union Pacific Co., but in his own behalf and in good faith.

Pending such conversion the trust company was authorized to collect the dividends accruing on the stock, and to vote the same only when and as directed by the court. Upon conversion of a certificate of interest into Southern Pacific stock the holder becomes entitled to receive the accumulated dividends.

If by January 1, 1916, any certificate of interest has not been converted into Southern Pacific stock, the court may order the sale of the Southern Pacific stock represented thereby.

The plan effectually prevented the Union Pacific Co. or its stockholders who were parties to the combination from continuing in control of the Southern Pacific. The great advantage of the course pursued over a compulsory and immediate sale at public auction of the $126,650,000 of Southern Pacific stock is that, whilst as effectual in dissolving the combination, it saved the stockholders of both companies from unnecessary losses and avoided the very serious financial strain which such a sale would have entailed.

In actual practice the plan is working successfully. Up to November 1, 1913, through conversion of the certificates of interest or of subscription receipts issued by the trust company, $68,411,400 of the $88,357,600 of Southern Pacific stock transferred to the trust company by the Union Pacific Co. has passed into the hands of persons who made the required affidavits.

The principle established by this decree has been adhered to in similar suits instituted during this administration. Thus in the suit against the Reading Co. and affiliated corporations—the anthracite coal combination—the petition asks that the Reading Co. be required to dispose of the stocks of the constituent companies composing the combination to persons not its stockholders or agents or otherwise under its direction or control. My fixed purpose is to oppose any plan of dissolution which would leave the separate parts of the unlawful combination under the control of the same set of men.

Anthracite Coal Case.

This case was decided December 16, 1912. (United States *v.* Reading Company et al., 226 U. S., 334.) It was held (1) that the defendants, including most of the anthracite coal carrying railroads and affiliated coal companies, were unlawfully combined in restraint of trade through the instrumentality of the Temple Iron Co., whose stock they owned in agreed proportions, and through which they purchased a number of independent mines and prevented the construction of an independent railroad; (2) that the system of contracts known as 65 per cent contracts, by which the defendants acquired control of the independent output, were in restraint of trade. The decree enjoined the defendants from voting or receiving the dividends on the stock of the Temple Iron Co., or otherwise attempting to exercise any control over it, and canceled the 65 per cent contracts. A general charge that defendants were engaged in a combination in restraint of trade was dismissed. Charges against separate groups of the defendants, namely, (1) the Reading Co. and affiliated corporations, (2) the Lehigh Valley Railroad Co. and affiliated corporations, and (3) the Erie Railroad Co. and affiliated corporations, were not determined, but were left to be dealt with in separate proceedings.

Cotton Corner Case.

In this case, decided January 6, 1913, the Supreme Court sustained an indictment charging defendants with violating the antitrust act by combining to run a corner in cotton on the New York Cotton Exchange and thereby to obtain control of the supply and the price. (226 U. S., 525.)

Shoe Machinery Case.

In this case, decided February 3, 1913, the Supreme Court held that an indictment charging, as construed by the district court, an agreement by various persons to combine their businesses of manufacturing patented machines used in making different parts of shoes, which businesses were not competitive, did not state a case under the antitrust act. (227 U. S., 202.)

Alaska Transportation Cases.

The Supreme Court on demurrer sustained an indictment charging certain steamship companies and a railroad company with having combined to restrain and monopolize trade by entering into an agreement whereby the railroad company made joint through routes and rates with such steamship companies and refused to do so with a so-called independent steamship company. (228 U. S., 87.) The case is now being prepared for trial.

Naval Stores Case.

This was an indictment against the American Naval Stores Co. and its officers, charging them with conspiracy to restrain and monopolize trade in naval stores. There was a conviction, and fines were imposed aggregating $17,500, and in addition two of the defendants were sentenced to jail for three months each. By writ of certiorari the case was brought to the Supreme Court, which on June 9, 1913, reversed the judgment of the lower court because the judge's charge permitted the jury to render a verdict upon any one of the methods of restraining trade alleged in the indictment, when as a matter of fact some of them, viewed alone, would not support a verdict. (229 U. S., 373.)

Status of Cases Instituted Prior to July 1, 1912.

The United States v. *United States Steel Corporation and others.* The taking of testimony in chief on behalf of the Government has been completed and that on behalf of defendant is being taken.

United States v. *International Harvester Company et al.* The taking of testimony having been concluded, this case was heard at St. Paul, Minn., during the week beginning November 3, 1913.

United States v. *Terminal Railroad Association of St. Louis et al.* Since the favorable decision by the Supreme Court, rendered April 22, 1912, the form of decree has been in controversy. There will be a hearing on that subject before the circuit judges at St. Louis on December 6, 1913.

United States v. *Great Lakes Towing Company et al.* On February 11, 1913, the suit against the Great Lakes Towing Co. et al., for monopolizing towing facilities at most of the important lake ports, was decided by the district court in favor of the Government. The parties have been unable to agree upon a method of dissolution, and have accordingly submitted to the court their respective plans.

United States v. *American Sugar Refining Company et al.* The Government has concluded the taking of its testimony in chief.

United States v. *Herman Sielcken et al.* (Coffee case.) This was a proceeding in equity to enjoin Herman Sielcken, a coffee importer, representing Brazilian interests and others, from restraining trade and commerce in coffee by means of a so-called plan of "valorization." Upon the advice of the State Department that representations had been made by the Brazilian Government that the entire quantity of coffee which was being withheld from market had been sold to a large number of dealers throughout the United States, the suit was dismissed in May, 1913.

United States v. *Frank Hayne, James A. Patten et al.* (Cotton Corner case). Following the above-mentioned decision of the Su-

preme Court in this case, one of the principal defendants entered a plea of guilty and was fined $4,000. An amended indictment was returned against the other defendants on July 1, 1913, as stated below.

United States v. *American Naval Stores Company et al.* The demurrer interposed to the petition in the civil suit against the American Naval Stores Co. et al. was overruled in January, 1913. In the following March defendant suspended business because of financial difficulties, and since then no further action has been taken in the case.

United States v. *Standard Sanitary Manufacturing Company et al.* (Bath Tub case.) As stated in the last annual report of the Attorney General, the civil case against the Bath Tub Trust was decided by the Supreme Court in favor of the Government on November 18, 1912. The criminal case against the same combination was retried in February, 1913, and resulted in a verdict of guilty, and fines aggregating $51,000 were imposed and paid.

United States v. *Hamburg-Amerikanische Packetfahrt Actien Gesellschaft et al.*, *United States* v. *Prince Line (Limited) et al.*, *and United States* v. *American-Asiatic Steamship Company et al.* (Ocean Steamship Pools.) Of the three cases pending against alleged combinations by ocean carriers to control or restrain trade and commerce between the United States and foreign countries, that against the Hamburg-American Packet Co. et al. is being prepared for trial, the Government has completed taking testimony in chief in that against the Prince Line Co. (Ltd.) et al., and is taking testimony in that against the American-Asiatic Steamship Co. et al.

United States v. *Eastern States Retail Lumber Dealers' Association et al.* The case against the Eastern States Retail Lumber Dealers' Association and others—an alleged combination of retail lumber dealers to prevent wholesalers selling directly to consumers by blacklisting and boycotting them if they do—is pending in the Supreme Court on appeal by the defendants, having been argued in November, 1913. Three other somewhat similar cases against associations of lumber dealers are pending in various stages in the district courts. On the recommendation of the United States district attorney for the northern district of Illinois, a nolle prosequi was entered June 6, 1913, in the criminal case against the Lumber Secretaries Bureau of Information et al.

United States v. *Lake Shore & Michigan Southern R. R. et al.* (Soft Coal case.) The civil suit against the combination of so-called soft-coal carrying roads in Ohio and West Virginia was decided by the district court in favor of the Government in December, 1912. A supplemental decision as to the relief to be granted was rendered November 10, 1913. With that as a basis the parties are now at work upon plans of dissolution.

United States v. *United Shoe Machinery Co. et al.* The testimony of the Government in the civil suit has been taken and that of defendant will be commenced in December, 1913. The trial of the indictment against substantially the same defendants has been deferred until the civil suit has been tried.

United States v. *Chicago Butter & Egg Board.* This case was argued at the fall term, and decision is awaited.

United States v. *National Cash Register Co. et al.* After a long trial the criminal case resulted in a verdict as to 29 of the 30 defendants, and fines aggregating $135,000 and jail sentences ranging from nine months to one year were imposed. The civil case is at issue and the taking of testimony will shortly begin.

United States v. *New Departure Manufacturing Company et al.* (Coaster Brake cases.) In the criminal case the corporate defendants and certain of the individual defendants entered pleas of guilty, and other individual defendants entered pleas of nolo contendere, and fines aggregating $81,500 were imposed. In the civil case instituted May 27, 1913, the defendants agreed to a decree granting the relief sought.

United States v. *The Keystone Watch Case Company et al.* The testimony on both sides has been taken, briefs have been filed, and this case is awaiting a hearing.

United States v. *Isaac Whiting et al.* (Milk cases.) These cases, pending in the district of Massachusetts, were argued on a demurrer to the indictments in November, 1912, and a decision is awaited.

United States v. *Periodical Clearing House et al.* (Magazine case.) The trial resulted in an equally divided court, and an order of dismissal was entered May 29, 1913.

United States v. *Purrington et al.* (Paving Brick case.) This was an indictment in the northern district of Illinois alleging a conspiracy to restrain trade in paving bricks. On June 3, 1913, a nolle prosequi was entered on the recommendation of the United States District Attorney.

United States v. *William C. Geer et al.* (Paper Board case.) This is an indictment pending in the southern district of New York. A demurrer has been overruled and the case will be pressed to an early trial.

United States v. *A. Haines et al.* (The Longshoremen's Association case.) In the two indictments against the members of the Longshoremen's Association in Florida, the defendants entered pleas of guilty and were sentenced each to four hours' confinement.

United States v. *Julius F. Miller et al.* (Charcoal case.) A demurrer to the indictment returned in the eastern district of New York against certain dealers in charcoal was sustained in October, 1912, on the ground that interstate commerce was not affected.

United States v. *The North Pacific Wharves & Trading Co. et al.* (Alaska Transportation cases.) The criminal case against the North Pacific Wharves & Trading Co. et al. resulted in a disagreement of the jury. A retrial will probably be had. The case against the Pacific & Arctic Navigation Co. et al., which was sustained by the Supreme Court on demurrer to the indictment, as above stated, is being prepared for trial.

United States v. *Hunter Milling Company et al.* This was an indictment alleging a combination in restraint of trade in wheat products. A verdict of guilty was returned in May, 1913, and fines aggregating $2,000 were imposed.

Cases Instituted Since July 1, 1912.

Since July 1, 1912, there have been instituted 33 proceedings, 10 of which have been disposed of. The character, present status, and other information pertaining to each are shown below:

United States v. *Central-West Publishing Co. et al.*, northern district of Illinois. Petition filed August 3, 1912, to enjoin an alleged combination in restraint of interstate trade and commerce in plate and ready-print matter. Decree granting relief asked entered by consent August 3, 1912.

United States v. *Associated Billposters and Distributers et al.*, northern district of Illinois. Petition filed August 3, 1912, to enjoin an alleged combination in restraint of interstate and foreign trade and commerce in posters. Defendants have interposed a demurrer, which has been set for hearing on December 1, 1913.

United States v. *Motion Picture Patents Company et al.*, eastern district of Pennsylvania. Petition filed August 15, 1912, to enjoin an alleged combination in restraint of interstate and foreign trade and commerce in machines, appliances, and apparatus relating to the motion-picture art. The testimony in chief on behalf of Government has been taken and that on behalf of defendants in now being taken.

United States v. *Calvin N. Payne et al.*, northern district of Texas. Indictment returned August 29, 1912, charging a conspiracy in restraint of interstate and foreign trade and commerce in oils and oil products. Nolle prosequi entered February 25, 1913.

United States v. *Consolidated Rendering Co. et al.*, district of Massachusetts. Two indictments returned October 31, 1912, charging monopolization of interstate trade and commerce in rendering materials, so called.

United States v. *The Master Horseshoers' National Protective Association et al.*, eastern district of Michigan. Petition filed December 12, 1912, to enjoin a combination in restraint of trade and commerce among the several States and with the Dominion of Can-

ada in drilled horseshoes, adjustable calks, and rubber hoof pads. Pending on demurrer.

United States v. *Philadelphia Jobbing Confectioners' Association et al.*, eastern district of Pennsylvania. Petition filed December 13, 1912, charging combination in restraint of interstate commerce in candies, confections, and similar commodities. Consent decree entered February 17, 1913.

United States v. *Elgin Board of Trade et al.*, northern district of Illinois. Petition filed December 14, 1912, to enjoin a combination of large centralizing concerns to restrain interstate commerce in butter and butter fat and arbitrarily to fix the price thereof.

United States v. *Charles S. Mellen et al.*, southern district of New York. (New Haven case.) Indictment returned December 23, 1912, charging a combination to prevent the construction, by or in the interest of the Grand Trunk Railway Co., of lines of railroad from Palmer, Mass., to Providence, R. I.; from White River Junction, Vt., to Boston; and from Boston to Blackstone, connecting there with the Palmer-Providence Line, thereby forestalling threatened competition in transportation from and to New England.

United States v. *Kellogg Toasted Corn Flake Company et al.*, eastern district of Michigan. Petition filed December 26, 1912, to enjoin an alleged combination to fix the resale price of Kellogg's Corn Flakes.

United States v. *Page et al.*, district of Oregon. Indictment returned February 5, 1913, charging 15 individuals, acting through the Produce Merchants' Exchange of Portland, with unlawfully controlling the purchase, distribution, and sale of approximately 90 per cent of the produce, fruit, and vegetables shipped into the State of Oregon. Defendants pleaded guilty, and fines aggregating $8,450 were imposed and collected.

United States v. *Krentler-Arnold Hinge Last Company et al.*, eastern district of Michigan. Petition filed February 7, 1913, to enjoin an alleged combination to control the price of shoe and boot lasts, patented and unpatented. Consent decree, granting substantially the relief asked, was entered at Detroit, Mich., on February 7, 1913.

United States v. *United Shoe Machinery Company of New Jersey et al.*, district of New Jersey. Petition filed February 8, 1913, to enjoin an alleged contract in restraint of trade in respect of "inseam trimming machines."

United States v. *The Southern Wholesale Grocers' Association et al.*, northern district of Alabama. Petition filed January 10, 1913, for rule to show cause why an attachment for a criminal contempt for alleged violation of a decree entered October 17, 1911, should not

issue. The association and three individual members were adjudged guilty of contempt and fines aggregating $5,500 were imposed on July 29, 1913.

United States v. *Board of Trade of the City of Chicago et al.*, northern district of Illinois. Petition filed February 11, 1913, to enjoin rule 33 of the Chicago Board of Trade, by which, it is alleged, the price of grain arriving in Chicago when the board is not in session is arbitrarily determined, thereby eliminating competition. Set for hearing on December 1, 1913.

United States v. *The Cleveland Stone Company et al.*, northern district of Ohio. Petition filed February 12, 1913, to enjoin an alleged monopoly of the manufacture and sale of stone (building, paving, curbing, and grindstones).

United States v. *The D. L. & W. R. R. Co. and The D. L. & W. Coal Co.*, district of New Jersey. Petition filed February 13, 1913, charging the railroad company with transporting anthracite coal in which it had an interest in violation of the commodities clause, and with entering into an unlawful contract whereby the coal company was given a monopoly of the sale of anthracite produced along the line of the railroad company. The taking of testimony on behalf of the Government is nearly completed.

United States v. *The McCaskey Register Company et al.*, northern district of Ohio. Petition filed February 20, 1913, to enjoin an alleged restraint and monopolization of the manufacture and sale of account registers and appliances.

United States v. *International Brotherhood of Electrical Workers, Local Unions Nos. 9 and 134, et al.*, northern district of Illinois. Petition filed February 24, 1913, to enjoin defendants from interfering with the business of the Postal Telegraph-Cable Co. A temporary injunction was granted and is still in force.

United States v. *Corn Products Refining Company et al.*, southern district of New York. Petition filed March 1, 1913, to enjoin an alleged combination to restrain and monopolize interstate trade and commerce in corn products.

United States v. *The American Thread Company et al.*, district of New Jersey. Petition filed March 3, 1913, to enjoin an alleged combination to restrain and monopolize interstate trade and commerce in thread.

United States v. *The Burroughs Adding Machine Company et al.*, eastern district of Michigan. Petition filed March 3, 1913, to enjoin an alleged combination to monopolize interstate trade in adding machines. A consent decree was entered March 3, 1913.

United States v. *American Coal Products Company et al.*, southern district of New York. Petition filed March 3, 1913, to enjoin an

alleged combination to restrain and monopolize interstate trade in tarred roofing felts, coal-tar pitch, and other coal-tar products. On March 4, 1913, a decree was entered by consent.

United States v. *Terminal Railroad Association of St. Louis et al.*, eastern district of Missouri. Petition filed March 4, 1913, to enjoin a combination to suppress competition in the transportation of soft coal from Illinois to St. Louis, Mo.

United States v. *The New Departure Manufacturing Company et al.*, western district of New York. Petition filed May 27, 1913, to enjoin an alleged combination to restrain and monopolize the manufacture and sale of bicycle and motor-cycle parts and coaster brakes. A decree granting relief sought was entered by consent May 27, 1913.

United States v. *White et al.*, southern district of West Virginia. Indictment returned June 7, 1913, against 19 members of the United Mine Workers of America, alleging a conspiracy by them to interfere with interstate commerce in coal mined in West Virginia.

United States v. *Eastman Kodak Company et al.*, western district of New York. Petition filed June 9, 1913, to enjoin an alleged combination to restrain and monopolize the manufacture, sale, and distribution of photographic supplies.

United States v. *The Quaker Oats Company et al.*, northern district of Illinois. Petition filed June 11, 1913, to enjoin an alleged combination to restrain and monopolize interstate trade and commerce in oatmeal products and by-products in the United States.

United States v. *Hippen et al.*, western district of Oklahoma. Indictment returned June 25, 1913, charging a conspiracy by dealers in Oklahoma City to suppress competition in buying and selling produce. Demurrer to indictment sustained October 1, 1913.

United States v. *Thompson et al.*, southern district of New York. Amended indictment returned July 1, 1913, charging the defendants with running a corner in cotton on the New York Cotton Exchange.

United States v. *American Telephone & Telegraph Company et al.*, district of Oregon. Petition filed July 24, 1913, to enjoin an alleged monopolization of the means of telephonic communication in certain States of the far West. Defendants have answered, and the taking of testimony on behalf of the Government is proceeding rapidly.

United States v. *Reading Company et al.*, eastern district of Pennsylvania (Anthracite Coal Combination). Petition filed September 2, 1913, against a combination consisting of Reading Co. and affiliated corporations, charging it with restraining and monopolizing trade in anthracite coal. Defendants have recently answered.

Criminal Prosecutions Under the Antitrust Act.

The enforcement of criminal liability under the antitrust act during the past year has been attended with greater success than heretofore.

In the Cash Register case, 29 of the 30 defendants were convicted, and fines aggregating $135,000 and jail sentences varying from 9 to 12 months were imposed.

The first trial of the Bath Tub case resulted in a disagreement amongst the jury, but the case was retried in February, 1913, and a verdict of guilty was brought in and fines aggregating over $50,000 were imposed.

In the Cotton Corner case, following the decision of the Supreme Court sustaining the indictments, one of the principal defendants entered a plea of guilty and was fined $4,000.

CASES UNDER THE INTERSTATE-COMMERCE LAWS.

Prosecutions for violations of the act to regulate commerce and related acts, although under the direction and control of the Department of Justice, are usually instituted upon the suggestion of the Interstate Commerce Commission.

Rebates and Unlawful Discriminations.

Since the last report, 49 cases have been instituted and 65 concluded under the provisions of the act to regulate commerce and the so-called Elkins Act, prohibiting the giving or receiving of rebates and discriminations. The following is a summary of such cases:

CASES INSTITUTED.

United States *v.* Cleveland, Cincinnati, Chicago & St. Louis Railway Co., Chicago, Indiana & Southern Railway Co., Lake Shore & Michigan Southern Railway Co., John Carstensen, vice president New York Central Lines (northern district of Illinois). December 17, 1912, indictment for granting rebates and for discrimination.

United States *v.* Jackson Brothers Lumber Company and Ray West (eastern district of Virginia). January 6, 1913, indictment for false billing (underweighing) shipments of lumber from Wahelville, Va., to Salisbury, Md.

United States *v.* New York, New Haven & Hartford R. R. Co. (first district of Massachusetts). January 17, 1913, indictment for granting concessions to Elm Milk Farm Co. Forty counts.

United States *v.* New York, New Haven & Hartford R. R. Co. (first district of Massachusetts). January 17, 1913, indictment for engaging in interstate commerce without tariff authority. Forty counts.

United States *v.* Lehigh Valley Railroad Company (western district of New York). January 10, 1913, indictment for granting concessions to Yates-Lehigh Coal Co., in connection with lease of certain land for coal yards. Eleven counts.

United States *v.* New York Central & Hudson River R. R. Co. (western district of New York). January 10, 1913, indictment for failure to collect lawfully published demurrage charges. One hundred counts.

United States *v.* New York Central & Hudson River R. R. Co. (western district of New York). January 10, 1913, indictment for failure to collect lawfully published demurrage charges. One hundred counts.

United States *v.* New York Central & Hudson River R. R. Co. (western district of New York). January 10, 1913, indictment for failure to collect lawfully published demurrage charges. One hundred counts.

United States *v.* Erie Railroad Co. (western district of New York). January 10, 1913, indictment for failure to collect lawfully published demurrage charges. Fifty-one counts.

United States *v.* Grand Trunk Railway of Canada, Frank P. Dwyer, agent, and Empire Circuit Co. (western district of New York). January 10, 1913, indictment for conspiracy to violate section 6, Hepburn Act, in connection with transportation of theatrical companies. Two counts.

United States *v.* Seaboard Air Line Railway (southern district of Georgia). January 18, 1913, indictment for receiving concessions in connection with shipments of company fuel coal. Thirteen counts.

United States *v.* Vance-Eller Corporation (western district of Virginia). February 18, 1913, indictment for misbilling shipments of cabbage from Marion, Va., to Jacksonville, Fla. Seven counts.

United States *v.* G. W. Sheldon & Co., G. W. Sheldon, and Henry W. Ackhoff (southern district of New York). February 26, 1913, indictment for soliciting, accepting, and receiving rebates from Lehigh Valley Railroad in connection with import shipments. Five counts. September 3, 1913, nolle prosequi entered in case of George W. Sheldon on account of death. Cases against other defendants still pending.

United States *v.* Leo V. Hahn, T. F. Ryan, and A. M. Waugh, trading as the Imperial Rice Company (southern district of Texas). March 8, 1913, indictment returned for obtaining concessions in connection with interstate shipments of rice. Eight counts.

United States *v.* F. E. Harris (southern district of California). March 10, 1913, indictment for obtaining refunds on shipments of rice by means of false claims.

United States *v.* The L. W. Blinn Lumber Company (southern district of California). March 28, 1913, indictment for false billing of roofing paint and paper in violation of section 10. Two counts.

United States *v.* Oliver Darby (southern district of California). March 28, 1913, indictment for violation of section 10 in connection with weighing shipments—false weights. Three counts.

United States *v.* Louis Lipp Company and Albert Weil, Vice President and Secretary (southern district of Ohio). April 11, 1913, indictment for attempting to secure transportation at less than lawful rates by underweighing in violation of section 10. Twenty-seven counts.

United States *v.* Vandalia Railroad Co. (eastern district of Illinois). May 16, 1913, indictment for granting rebates to the Lumaghi Coal Co. by way of loans in consideration of the routing of traffic via its lines.

United States *v.* Cleveland, Cincinnati, Chicago & St. Louis Railway Co. (eastern district of Illinois). May 16, 1913, indictment for giving and granting discrimination in favor of O'Gara Coal Co.

United States *v.* Cleveland, Cincinnati, Chicago & St. Louis Railway Co., Chicago, Indiana & Southern Railway Co. (eastern district of Illinois). May 16,

1913, indictment for granting and giving concessions to O'Gara Coal Co. out of legally published rate on coal to South Bend.

United States *v.* O'Gara Coal Co. (eastern district of Illinois). May 16, 1913, indictment for accepting and receiving concessions from the Cleveland, Cincinnati, Chicago & St. Louis Railway Co. and Chicago, Indiana & Southern Railway Co. in connection with shipments of coal to South Bend.

United States *v.* Cleveland, Cincinnati, Chicago & St. Louis Railway Co.., Chicago, Indiana & Southern Railway Co., and Grand Trunk Railway Co. of Canada (eastern district of Illinois). May 16, 1913, indictment for conspiracy to grant and give concessions out of the legally published rate to the O'Gara Coal Co.

United States *v.* R. B. Shimer & Co. and Harry C. Shimer (southern district of New York). May 16, 1913, indictment for soliciting and receiving information concerning shipments consigned to other parties, in violation of section 15.

United States *v.* Grand Trunk Western Railway Co. (southern district of Ohio). June 5, 1913, indictment for obtaining concessions in regard to shipments of fuel coal at less than legally published rates. Twenty counts.

United States *v.* Michigan Central Railroad Co. (eastern district of Michigan). June 20, 1913, indictment for granting concessions by failing to collect demurrage. Eighteen counts.

United States *v.* Michigan Central R. R. Co. (eastern district of Michigan). June 20, 1913, indictment for failure strictly to observe legally published tariffs. Eighteen counts.

United States *v.* Michigan Central Railroad Co. (eastern district of Michigan). June 20, 1913, indictment for failure to strictly observe published demurrage tariffs. One count.

United States *v.* Michigan Central Railroad Co. (eastern district of Michigan). June 20, 1913, indictment for granting concessions by failure to collect demurrage. Thirty counts.

United States *v.* Michigan Central Railroad Co. (eastern district of Michigan). June 20, 1913, indictment for failure strictly to observe published demurrage tariffs. Thirty counts.

United States *v.* R. B. Shimer & Co., Harry C. Shimer and Adolph Fortgang (southern district of New York). June 26, 1913, indictment for presenting fraudulent claims against railroads and obtaining descrimination in connection with shipments of eggs. Fifteen counts.

United States *v.* DeWinter & Co., John C. DeWinter, E. M. Garrison, H. D. Wheeler & Geo. Miller (southern district of New York). June 26, 1913, indictment for obtaining discrimination and for presenting fraudulent claims against railroads in connection with shipments of eggs. Fifteen counts.

United States *v.* Willard P. Brown and William H. Sanford (southern district of New York). June 26, 1913, indictment for obtaining allowance by means of fraudulent claims against railroads and for soliciting discrimination in connection with shipments of eggs. Fifteen counts.

United States *v.* Wm. A. Scarborough and Charles F. Adams, trading as Scarborough, Adams & Co. (southern district of New York). July 21, 1913, indictment for attempting to obtain transportation at less than lawful rates by false claims for damage to eggs. Fifteen counts.

United States *v.* Grand Trunk Railway Company of Canada (district of Maine). September 18, 1913, indictment for engaging in transportation without tariffs on file. Five counts.

United States *v.* Henry A. Dix & Sons Company (southern district of New York). October 20, 1913, indictment for misbilling shipments of cotton piece goods and notions. Five counts.

United States *v.* David Yoder (district court of Colorado). June 3, 1913, indictment for unlawfully using an interstate free-trip pass.

United States *v.* G. W. Gowan (district court of Colorado). June 3, 1913, indictment for aiding the unlawful use of an interstate free-trip pass.

United States *v.* R. S. Jones (northern district of Iowa). June 17, 1913, indictment for unlawful use of interstate pass.

United States *v.* American Thermo-Ware Co. (southern district of New York). October 26, 1913, indictment for false billing. Five counts.

United States *v.* Eimer & Amend Company, Inc. (southern district of New York). October 29, 1913, indictment for misdescription of contents of package for shipment in interstate commerce. Five counts.

United States *v.* American Thermos Bottle Co. (southern district of New York). October 30, 1913, indictment for misdescription of contents of packages for shipment in interstate commerce. Five counts.

United States *v.* The Lumber Products Company (eastern district of Tennessee). November 13, 1913, indictment for violation of section 10 of the act in connection with substitution in transit of shipments of lumber at Chattanooga. Five counts.

United States *v.* G. H. Evans (eastern district of Tennessee). November 13, 1913, indictment for violation of section 10 of act in connection with substitution in transit of shipments of lumber at Chattanooga. Five counts.

United States *v.* H. S. Tavshanjian, Corporation (southern district of New York). November 13, 1913, indictment for misbilling oriental rugs as carpets. Five counts.

United States *v.* Wichita Falls & Northwestern Railway Company (western district of Oklahoma). October 30, 1913, indictment for granting a concession to the Kansas Bitulithic Co. in violation of section 1 of Elkins Act. One count.

United States *v.* Frank G. Miller (northern district of Ohio). October 31, 1913, indictment for inducing an agent to discriminate in his favor by issuing bills of lading prior to receipt of shipment. Three counts.

United States *v.* Glen B. Miller (northern district of Ohio). October 31, 1913, indictment for making false entry in the records of a carrier. Two counts.

United States *v.* S. B. Cox (eastern district of Texas). March 19, 1913, indictment for making false entries in the records of the St. Louis Southwestern Railway Co. Five counts.

CASES CONCLUDED.

United States *v.* Minneapolis, St. Paul & Sault Ste. Marie Railway Co. and T. E. Sands, general freight agent (district court of Minnesota). Indictment for granting and giving concessions in connection with transit shipments of flour. April 1, 1913, plea of guilty entered by Minneapolis, St. Paul & Sault Ste. Marie Railway Co.; fine of $5,000 imposed. Nolle prosequi entered as to defendant T. E. Sands.

United States *v.* Russell-Miller Milling Co. (district court of Minnesota). Indictment for obtaining transportation at less than legal rate in connection with shipments of flour. April 1, 1913, plea of guilty; fine of $5,000 imposed.

United States *v.* The Denver & Rio Grande Railroad Co. district court of Colorado). Indictment for granting concessions in violation of Elkins Act. May 2, 1913, plea of nolo contendere; fine of $1,000 imposed.

United States *v.* The Colorado Fuel & Iron Co. (district court of Colorado). Indictment for receiving concessions in violation of Elkins Act. May 20, 1913, plea of nolo contendere; fine of $1,000 imposed.

United States *v.* The Victor-American Fuel Co. (district court of Colorado). Indicted for receiving concessions in violation of Elkins Act. May 20, 1913, plea of nolo contendere; fine of $1,000 imposed.

United States *v.* The Colorado Portland Cement Co. (district court of Colorado). Indictment for receiving concessions in violation of Elkins Act. May 20, 1913, plea of nolo contendere; fine of $1,000 imposed.

United States *v.* The United States Portland Cement Co. (district court of Colorado). Indictment for receiving concessions in violation of Elkins Act. May 20, 1913, plea of nolo contendere; fine of $1,000 imposed.

United States *v.* The Colorado & Southern Railway Co. (district court of Colorado). Indictment for granting concessions in violation of the Elkins Act. May 20, 1913, plea of nolo contendere; fine of $1,000 imposed.

United States *v.* The Great Western Sugar Co. (district court of Colorado). Indictment for receiving concessions in violation of Elkins Act. May 20, 1913, plea of nolo contendere; fine of $1,000 imposed.

United States *v.* The Denver & Rio Grande Railroad Co. (district court of Colorado). Indictment for granting concessions in violation of Elkins Act. October 11, 1913, nolle prosequi entered.

United States *v.* The Victor-American Fuel Company (district court of Colorado). Indictment for receiving concessions in violation of Elkins Act. October 11, 1913, nolle prosequi entered.

United States *v.* The Colorado Fuel & Iron Co. (district court of Colorado). Indictment returned for receiving concessions in violation of Elkins Act. October 11, 1913, nolle prosequi entered.

United States *v.* The Victor American Fuel Co. (district court of Colorado). Indictment returned for receiving concessions in violation of Elkins Act. October 11, 1913, nolle prosequi entered.

United States *v.* The Great Western Sugar Co. (district court of Colorado). Indictment for receiving concessions in violation of Elkins Act. October 11, 1913, nolle prosequi entered.

United States *v.* The United States Portland Cement Co. (district court of Colorado). Indictment for receiving rebates in violation of Elkins Act. October 11, 1913, nolle prosequi entered.

United States *v.* The Colorado & Southern Railway Co. (district court of Colorado). Indictment for granting rebates in violation of Elkins Act. October 11, 1913, nolle prosequi entered.

United States *v.* The Colorado Fuel & Iron Co. (district court of Colorado). Indictment returned for receiving concessions in violation of Elkins Act. October 11, 1913, nolle prosequi entered.

United States *v.* The Victor-American Fuel Co. (district court of Colorado). Indictment for receiving rebates in violation of Elkins Act. October 11, 1913, nolle prosequi entered.

United States *v.* The Colorado Fuel & Iron Co. (district court of Colorado). Indictment returned for receiving rebates in violation of Elkins Act. October 11, 1913, nolle prosequi entered.

United States *v.* The Colorado Portland Cement Co. (district court of Colorado). Indictment for receiving concessions in violation of the Elkins Act. October 11, 1913, nolle prosequi entered.

United States *v.* The Denver & Rio Grande Railroad Co. (district court of Colorado). Indictment for unlawful issue of interstate passes. October 11, 1913, nolle prosequi entered.

United States *v.* David Yoder (district court of Colorado). Indictment for unlawfully using an interstate free-trip pass. Defendant arraigned and pleaded guilty; fine, $100 and costs.

United States *v.* The Denver & Rio Grande Railroad Co. (district court of Colorado). Indictment for transporting passengers at a less rate than that provided for in published tariffs. October 11, 1913, nolle prosequi entered.

United States *v.* G. W. Cowan (district court of Colorado). Indictment for aiding the unlawful use of an interstate free-trip pass. June 3, 1913, defendant arraigned and pleaded guilty. Fine $100 and costs.

United States *v.* Frederick E. Harris (southern district of California). Indictment for obtaining and attempting to obtain payment for damages through false and fictitious claims. March 7, 1913, pleaded guilty; fine of $500 imposed.

United States *v.* L. W. Blinn Lumber Co. (southern district of California). Indictment for obtaining transportation at less than lawful rates by means of false classification of freight. May 13, 1913, plea of guilty; fine of $500 imposed.

United States *v.* The Michigan Central Railroad Co. (district of Indiana). Indictment for granting concessions to Chapin & Co. in connection with transit shipments of grain. May 21, 1913, plea of guilty; fine of $2,500 imposed.

United States *v.* The Michigan Central Railroad Co. (district of Indiana). Indictment for false billing in connection with shipments of grain. May 21, 1913, plea of guilty; fine of $2,500 imposed.

United States *v.* Chapin & Co. (district of Indiana). Indictment for accepting concessions from the Michigan Central Railroad in connection with transit shipments of grain. May 21, 1913, plea of guilty; fine of $5,000 imposed.

United States *v.* R. S. Jones (northern district of Iowa). Indictment for unlawful use of interstate pass. June 17, 1913, pleaded guilty; fine of $100 imposed and committed to Linn County jail until paid.

United States *v.* J. I. Donohue (northern district of Iowa). Indictment for wrongful use of interstate pass. October 13, 1913, dismissed on motion of United States attorney.

United States *v.* Chicago and Alton Railroad Co. (western district of Missouri). Indictment for giving reduced transportation to passengers. February 25, 1913, plea of nolo contendere; fine of $100 imposed.

United States *v.* Erie Railroad Company (western district New York). Indictment for failure to collect published tariff charges on anthracite coal at Buffalo, N. Y. Demurrer filed to the indictment as a whole and overruled as to the first 50 counts, but sustained as to 1 count. September 12, 1913, plea of nolo contendere; fine of $20,000 imposed.

United States *v.* The New York Central & Hudson River Railroad Co. (western district New York). Indictment for failure to collect lawfully published demurrage charges. March 4, 1913, plea of guilty; fine of $8,000 imposed.

United States *v.* The New York Central & Hudson River Railroad Co. (western district of New York). Indictment for failure to collect lawfully published demurrage charges. March 4, 1913, plea of guilty; fine of $7,000 imposed.

United States *v.* The New York Central & Husdon River Railroad Co. (western district of New York). Indictment for failure to collect lawfully published demurrage charges. March 4, 1913, plea of guilty; fine of $15,000 imposed.

United States *v.* St. Louis & San Francisco Railroad Co. (western district of Missouri). Indictment for granting concessions in connection with shipments of grain products. February 13, 1913, plea of guilty; fine of $1,000 imposed.

United States *v.* Ball & Gunning Milling Co (western district of Missouri). Indictment for accepting concessions on shipments of corn meal and chops. February 13, 1913, plea of guilty; fine of $1,000 imposed.

United States *v.* Ira Mendleson & Sibs, et al. (northern district of New York). Indictment for misrepresenting contents of packages delivered for transportation in interstate commerce. December 6, 1912, plea of guilty entered as to Ira Mendleson and fine of $5,000 imposed. Nolle prosequi entered as to other defendants.

United States *v.* South Georgia Railway Co. (southern district of Georgia). Indictment for transporting pipe from Adel, Ga., to Perry, Fla., at less than the published rate. December 13, 1912, plea of guilty; fine of $1,000 imposed.

United States *v.* Louis Lipp Company and Albert Weil (southern district of Ohio). Indictment for attempting to secure transportation at less than lawful rates by underweighing. May 3, 1913, plea of guilty entered and fine of $2,500 imposed on the Louis Lipp Company, and Albert Weil confined to Miami County jail for 60 days and pay costs.

United States *v.* The New York, Chicago & St. Louis Ry. Co. and Lehigh Valley Railroad Co. (northern district of Illinois). Indictment for granting rebates and concessions on shipments of fish and oysters from New York to Chicago. December 30, 1912, plea of guilty entered by Lehigh Valley Railroad Co. as to count 1 (55 counts); fine of $1,000 imposed. Nolle prosequi entered as to The New York, Chicago & St. Louis Ry. Co.

United States *v.* The New York, Chicago & St. Louis Ry. Co. (northern district of Illinois). Indictment for granting rebates and concessions. December 30, 1912, plea of guilty; fine of $1,000 and costs imposed.

United States *v.* Illinois Central Railroad Co. (northern district of Illinois). Indictment for unlawfully issuing annual passes to banana messengers not entitled thereto. December 30, 1912, plea of guilty; fine of $1,000 imposed.

United States *v.* Chicago, Rock Island & Pacific Ry. Co. (northern district of Illinois). Indictment for unlawfully issuing quarterly passes to banana messengers not entitled thereto. December 30, 1912, plea of guilty; fine of $1,000 and costs imposed.

United States *v.* Vance Eller Corporation (western district of Virginia). Indictment for misbilling shipments of cabbages. June 18, 1913, plea of guilty; fine of $200 imposed.

United States *v.* De Winter & Company, John C. De Winter, Edward M. Garrison, Harry D. Wheeler, and George Miller (southern district of New York). Indictment for fraudulent claims against railroads and obtaining discrimination in connection with shipments of eggs from the West. July 31, 1913, plea of guilty; fine of $7,000 against De Winter & Co.; $2,500 against John C. De Winter; $2,500 against Edward M. Garrison; sentence suspended for one year as against Harry D. Wheeler and George Miller.

United States *v.* R. B. Shimer & Co., Harry C. Shimer, and Adolph Fortgang (southern district of New York). Indictment for presenting fraudulent claims against railroads and obtaining discrimination in connection with shipments of eggs. July 25, 1913, plea of guilty; fine of $5,000 each against Harry C. Shimer and Adolph Fortgang, or $10,000; nolle prosequi entered as to R. B. Shimer & Co.

United States *v.* Wm. A. Scarborough and Charles P. Adams, trading as Scarborough, Adams & Co. (southern district of New York). Indictment for presenting fraudulent claims against railroads and obtaining discrimination in connection with shipments of eggs. October 15, 1913, plea of guilty; fine of $3,000 each imposed, or $6,000.

United States *v.* R. B. Shimer & Co. and Harry C. Shimer (southern district of New York). Indictment for soliciting, receiving, and obtaining information concerning shipments consigned to other parties without the consent of shipper or consignee. July 24, 1913, plea of guilty; fine of $1,000 imposed against Harry C. Shimer; nolle prosequi entered as to R. B. Shimer & Co.

United States *v.* Geo. W. Sheldon and Henry W. Ackhoff (southern district of New York). Indictment for receiving rebates from the Lehigh Valley Railroad Co. February 19, 1913, verdict directed for defendant. (But jury at

once returned indictments against same parties for same offense on different transactions.)

United States *v.* Oliver Darby (southern district of California). Indictment for making false statements of weight to carrier in connection with interstate shipments of vegetables. May 20, 1913, plea of guilty; fine of $500 imposed.

United States *v.* Harvie C. Miller and Morris F. Miller (district court of southern Georgia). Indictment for accepting rebates and concessions on shipments of grain from Philadelphia to Jacksonville. March 23, 1911, order sustaining demurrer and quashing indictment; March 24, 1911, appealed to Supreme Court; March 3, 1913, judgment of trial court reversed verdict of guilty as to Harvie C. Miller; fine of $5,000 imposed. Verdict of not guilty as to Morris F. Miller.

United States *v.* American Tobacco Company (western district of Kentucky). Indictment for accepting rebates on shipments of unmanufactured tobacco. May 21, 1913, verdict of not guilty.

United States *v.* Sterling Salt Company, James W. Brice, and William S. Doolittle (western district of New York). Indictment for false billing. July 16, 1913, verdict for defendant.

United States *v.* New York, New Haven & Hartford R. R. Co. (first district of Massachusetts). Indictment for transporting milk at less than legal rate from a point in Connecticut to Boston. April 16, 1913, nolle prosequi entered.

United States *v.* New York, New Haven & Hartford R. R. Co. (district court of Massachusetts). Indictment for granting concessions to Elm Milk Farm Co. and engaging in interstate commerce without tariff on file. April 26, 1913, plea of guilty; fine of $5,000 imposed.

United States *v.* Jackson Brothers Lumber Co. and Ray West, clerk (eastern district of Virginia). Indictment for false billing (underweighing) shipments of lumber from Wahelville, Va., to Salisbury, Md. May 6, 1913, plea of guilty; fine of $5,000 imposed against Jackson Bros. Lumber Co. and $250 against Ray West, or $5,250.

United States *v.* Huntingdon & Broad Top Mountain Railroad & Coal Co. (district court of middle Pennsylvania). Indictment for suffering and permitting false entries to be made in railroad records. May 8, 1913, plea of guilty; fine of $500 imposed

United States *v.* Huntingdon & Broad Top Mountain Railroad & Coal Co. (district court of middle Pennsylvania). Indictment for violation of commodities clause. May 8, 1913, nolle prosequi entered.

United States *v.* Huntingdon & Broad Top Mountain Railroad & Coal Co. (district court of middle Pennsylvania). Indictment for failure to observe demurrage tariff. May 8, 1913, nolle prosequi entered.

United States *v.* Henry A. Dix & Sons Company (southern district of New York). Indictment for false billing. October 28, 1913, plea of guilty; fine of $500 imposed.

United States *v.* American Thermo-Ware Company (southern district of New York). Indictment for false billing. October 30, 1913, plea of guilty; fine of $250 imposed.

United States *v.* Willard P. Brown and William H. Stanford (southern district of New York). Indictment for making false claims against railroads, also for obtaining discrimination in regard to shipments of eggs. November 4, 1913, plea of guilty entered by defendant Willard P. Brown; fine of $2,000 imposed. Case against other defendant still pending.

United States *v.* Eimer & Amend Company (Inc.) (southern district of New York). Indictment for misdescription of contents of packages for shipment in interstate commerce. November 5, 1913, plea of guilty; fine of $600 imposed.

United States *v.* American Thermos Bottle Co. (southern district of New York). Indictment for misdescribing contents of packages for shipment in interstate commerce. October 30, 1913, plea of guilty; fine of $250 imposed.

United States *v.* Leo B. Hahn and T. F. Ryan, trading as the Imperial Rice Co. (southern district of Texas). Indictment for securing concessions on shipments of rice by the device of substitution in transit. October 24, 1913, plea of guilty and fine of $1,000 each imposed, or $2,000.

United States *v.* Adams Express Company (western district of New York). Indictment for granting allowances not provided for by tariff in connection with drayage of cream. January 17, 1913, jury disagreed.

United States *v.* Texas & Pacific Railway Co. (eastern district of Louisiana). Indictment for accepting less than legal rate from American Chicle Co. in connection with shipments of gum, by changing bills of lading after shipment moved. April 8, 1913, jury disagreed.

United States *v.* Flegle Bros., E. C. Flegle and J. Flegle (district court of western Kentucky). Indictment for false billing of shipments of flour. April 21, 1913, plea of guilty; fine of $250 and costs imposed.

United States *v.* Geo. W. Sheldon & Co., G. W. Sheldon and Henry Ackhoff (southern district of New York). Indictment for receiving rebates from the Lehigh Valley Railroad September 3, 1913. Nolle prosequi entered in case of G. W. Sheldon on account of death. Cases against other defendants pending.

United States *v.* H. S. Tavshanjian, corporation (southern district of New York). Indictment for misbilling oriental rugs as carpets. November 14, 1913, plea of guilty; fine of $500 imposed.

The Commodities Clause.

In United States *v.* Delaware & Hudson Company (213 U. S., 366) the Supreme Court construed the commodities clause as prohibiting a railroad from transporting articles in which at the time of transportation it has any interest, direct or indirect, in a legal or equitable sense. It further held that a railroad has no interest, direct or indirect, in a legal or equitable sense, in articles manufactured or produced by a bona fide corporation of which the railroad is a stockholder.

In a later case (United States *v.* Lehigh Valley Railroad Co., 220 U. S., 257) the court held that if the corporation owning the articles transported by the railroad was so completely identical with the railroad as in fact to be but an arm of the railroad, then the railroad would have an interest in the articles in the sense of the statute, just as if the railroad held the title to the articles in its own name.

It is to be observed that under this construction the statute is not violated unless the railroad has the required interest in the articles *at the time of transportation.* It may have been the producer of the articles; but if it parted with the title before transporting them, it does not violate the act of Congress.

Thinking to bring themselves within this construction of the act the following plan has been devised: A railroad company engaged, say, in mining coal, either directly or through a controlled cor-

poration which is but a part of itself, will organize a new corporation, the stock of which will be distributed ratably amongst the stockholders of the railroad; whereupon the railroad will sell to the new corporation at the mouth of the mines its production of coal. This plan has been challenged in the case now pending in the district of New Jersey against the Delaware, Lackawanna & Western Railroad Co. and the Delaware, Lackawanna & Western Coal Co., the contention of the Government being that a corporation after all is but an association of persons, and that under this plan the same association of persons which mines the coal transports it, and that therefore such transportation is a violation of the act of Congress.

Safety-Appliance Acts.

During the year just ended 191 cases, representing 626 alleged violations of the safety-appliance acts, were transmitted to the United States attorneys for prosecution. An increase of 14 cases and 127 alleged violations is to be noted over the previous year. During the year $56,800 in penalties were recovered.

Hours-of-Service Act.

Three hundred and six cases, embodying 3,499 separate causes of action, were reported for prosecution under this statute, showing an increase of 89 cases and 1,364 violations over the last fiscal year. The satisfactory collection of penalties continued, $100,861.14 being recovered during the year.

Ash-pan Act.

But 5 alleged violations of this act were reported last year, showing a decrease over the fiscal year 1912. The penalties recovered during the year aggregate $1,200.

Twenty-Eight-Hour Law.

Violations of this act are detected by inspectors of the Department of Agriculture and are reported to this department for prosecution. Full statistical information concerning these prosecutions will be contained in the report of the Secretary of Agriculture. During the year 1,037 cases were reported to this department and transmitted to United States attorneys for prosecution, which shows an increase of 406 cases over 1912. Penalties aggregating $61,695 were recovered during the year.

FRAUDS ON THE REVENUE.

In the matter of the frauds discovered in 1907 in the importation of sugar at the port of New York the writ of error sued out by Heike,

the secretary and treasurer of the American Sugar Refining Co., to review the affirmance by the circuit court of appeals of his conviction, was argued in the Supreme Court and resulted in the affirmance of the judgment by that court on January 27, 1913. Thereupon he petitioned for a pardon, and on March 2, 1913, the sentence, which had been imprisonment for eight months and a fine of $8,000 and costs, was commuted to the fine and costs. Shortly thereafter Heike died.

Gerbracht, the general manager of the Brooklyn refinery of the American Sugar Refining Co., who was convicted at the same time with Heike, also filed a petition for clemency on January 16, 1913, especially in consideration of services rendered by him to the Government in the collection of $700,000 of drawback illegally collected by that company; and on February 24, 1913, Gerbracht's sentence, which was two years' imprisonment and a fine of $5,000, was commuted to 30 days in jail.

The case against the Federal Sugar Refining Co. to recover $119,080.98 for duties fraudulently withheld during the years 1902–1909, inclusive, is on the call in the District Court in the Southern District of New York waiting to be reached for trial.

On March 5, 1913, suit was brought in the District Court for the Eastern District of Louisiana to collect the Government's claim of $100,536.93 against the American Sugar Refining Co. for fraudulent sampling at the port of New Orleans in the years 1901 to 1907. This case is awaiting trial.

Prosecutions for customs frauds, especially at the port of New York, have been continued during the year and have resulted in the collection in that district of over $280,000 in fines, penalties, and forfeitures and the conviction of 31 persons in criminal prosecutions.

THE SUPREME COURT.

The following table shows the work of the Supreme Court of the United States last year, the number of cases docketed and the number disposed of. There was a decrease of 21 in the number of cases docketed on the appellate docket, and an increase of 77 in the number disposed of. The number of cases remaining undisposed of was decreased from 671 to 604.

	Appellate docket—October term.									
	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912
Cases at close of previous term not disposed of	306	282	280	305	343	421	478	586	640	671
Cases docketed at the term	425	400	488	476	471	487	503	509	530	509
Total	731	682	768	781	814	908	981	1,095	1,170	1,180
Cases disposed of at the term	449	402	463	438	393	430	395	456	499	576
Cases remaining undisposed of	282	280	305	343	421	478	586	640	671	604

A reference to the foregoing table shows a total of 1,170 cases on the appellate docket during the 1911 term. The number of cases pending was increased during the 1912 term to 1,180, showing an increase of 10 cases on the appellate docket.

At the close of the October term, 1911, there remained undisposed of on the appellate docket 671 cases and on the original docket 9 cases, making a total of 680. The number of cases docketed at the October term, 1912, was 521, of which 509 were on the appellate docket and 12 on the original docket. These, with the 680 cases remaining undisposed of, make the total number of cases pending at the last term 1,201, of which 1,180 were on the appellate and 21 on the original docket. Of this number, 585 were disposed of during the term, of which 576 were on the appellate and 9 on the original docket, leaving undisposed of at the close of the October term, 1912, 616 cases, 604 being on the appellate and 12 on the original docket.

The number of appellate cases actually considered by the court was 456, of which 253 were argued orally and 203 submitted on printed arguments. Of the 576 appellate cases disposed of, 200 were affirmed, 113 reversed, 90 dismissed, 64 were settled by the parties and dismissed, in 5 questions certified were answered, 101 were denials of petitions for writs of certiorari under the act of March 3, 1891, and 3 were docketed and dismissed.

The total number of cases on the appellate docket in which the United States was a party or had a substantial interest disposed of at the October term, 1912, was 143, in 4 of which there were cross-appeals. The United States was appellant in 30 of these cases, and appellee, etc., in 110, and 3 were certifications of questions.

Of the 30 cases appealed, etc., by the Government, 13 were decided in its favor and 8 adversely, 1 partly in favor of and partly adverse, 4 were dismissed by it, 1 was dismissed by the court for want of jurisdiction, 2 were modified and affirmed, and 1 was a denial of a petition for a writ of certiorari.

Of the 110 cases in which the Government was appellee, etc., 56 were determined in its favor and 5 adversely, 3 were modified and affirmed, 17 were dismissed by the appellants, 7 were dismissed by the court, 3 were docketed and dismissed, 17 were denials of petitions for writs of certiorari, and 2 were denials of applications for writs of error. In addition, 3 cases were certifications of questions which were decided in favor of the United States.

Of the foregoing 143 cases, 19 were appeals from the Court of Claims, 4 of which were taken by the Government and 15 by the other side. Of the 4 cases appealed by the Government, 3 were decided in its favor and 1 adversely; while of the 15 appealed by the other side, 10 were decided in favor of the Government, 2 adversely, and 3 were dismissed by the appellants.

Of the 143 cases referred to, 46 were criminal, of which 3 were capital, 11 being appealed by the Government under the Criminal Appeals Act, and 1 a petition for a writ of certiorari. Thirty-three (33) were appealed, etc., by the defendants, and 1 was a certified question, which was decided in favor of the Government. Of the above 12 cases, 5 were decided in favor of the United States, 3 adversely, 1 was dismissed by the Government, 1 was decided partly in favor of the Government and partly adverse, 1 petition for a writ of certiorari was denied, and 1 was dismissed by the court; while of the 33 cases appealed, etc., by the defendants, 11 were decided in favor of the Unite States, 1 on writ of certiorari adversely, 1 was dismissed by the court, 1 was dismissed by the defendants, in 16 petitions for writs of certiorari were denied, 1 was docketed and dismissed, and 2 writs of error were denied.

Thirteen (13) cases were appeals, etc., from the Circuit Court of Appeals, in 3 of which the Government was appellant and in 10 appellee. Of the 3 in which the United States was appellant, 2 were decided in its favor and 1 adversely; while of those in which it was appellant 3 were decided in its favor and 2 adversely, 1 was modified and affirmed, 2 were docketed and dismissed, and 2 writs of error were denied.

In cases finally determined the United States was respondent in 17 petitions for writs of certiorari and petitioner in 1, all of which were denied. Of these cases, 1 was from the Court of Appeals of the District of Columbia.

There were 2 cases from Porto Rico, and 4 from the Philippine Islands. Five (5) cases were appealed from the Commerce Court.

In 5 cases on the original docket 1 was decided in favor of the Government, 1 was dismissed per stipulation, 1 petition for a writ of habeas corpus was denied, and 2 petitions for writs of error, in which the Government was respondent, were denied.

In what were known as the "State Rate" cases the Government filed a brief as *amicus curiae* by leave of the court.

In the case of Slocum *v.* New York Life Insurance Company the Government, at the request of the American Bar Association, filed a brief on a petition for rehearing, which was denied.

Important Cases Decided.

Abstracts of the more important cases decided by the court during the October term, 1912, in which the Government was a party or had an interest, which have not been heretofore mentioned, will be found at the end of the report.

COURT OF CLAIMS.

Below is a brief summary of the report of the Assistant Attorney General in charge of the defense of suits in the Court of Claims and suits against the Government prosecuted in the district courts of the United States:

Total amount involved in cases disposed of during the year	$14,689,427.75
Total amount found for claimants	$704,464.65
Total amount claimed in cases filed during the year, exclusive of subnumbered claims under general docket numbers, in which no amount is stated, and including reinstated Indian-depredation cases	$20,164,288.16
Total number of cases disposed of during the year	1,543
Total number of cases filed	1,964
Total number of cases pending, including subnumbered claims	18,900
Approximate amount involved	$150,000,000.00

The foregoing totals cover all classes of cases of which the Court of Claims has jurisdiction, namely, (1) general jurisdiction, including cases under special acts of Congress; (2) departmental; (3) congressional; (4) Indian depredation; (5) French spoliation.

General Jurisdiction Cases.

General jurisdiction cases find their origin largely in the numerous contracts made by all departments of the Government. They arise out of contracts for the building of battleships, cruisers, and other vessels by the Navy Department; the erection of public buildings; dredging and improvement of rivers and harbors; the building and maintenance of dams, locks, and sea walls; contracts for Army supplies; contracts with mail contractors and railroad companies for carrying the mails; construction of dry docks; the alleged use and infringement of patented devices and suits wherein it is contended that an implied contract exists; contracts arising through the activities of the Reclamation Service. A large amount of litigation involves the construction of statutes affecting the pay of the Army and Navy and civil employees of the Government; the reimbursement of disbursing officers for United States funds lost without negligence; cases referred to the court by special acts of Congress with relation to dealings with the Indians; and so-called "cotton claims," filed under section 162 of the judiciary act approved March 3, 1911.

Under contracts of the Navy Department for the building of battleships, cruisers, etc., the amount claimed in pending suits is approximately $10,000,000; the dry-dock litigation approximates $2,500,000; patent litigation in the neighborhood of $11,000,000. In the "cotton claims" attempt is made to reach the funds now in the

United States Treasury estimated at something over $5,000,000, which, it is alleged, arose from captured and abandoned property, mostly cotton. The pending cases arising under the activities of the Reclamation Service aggregate more than $2,000,000. In addition to the cases, aggregating about $10,000,000, which the Government believes should be disposed of under the decisions of the Supreme Court in the cases of Hughes *v.* The United States and Jackson *v.* The United States, there are suits growing out of the improvement of rivers and harbors involving several million dollars.

Cases disposed of during the year	529
Amount claimed in cases disposed of	$12,328,713.74
Amount recovered by claimants	$279,614.45
Cases filed during the year	800
Approximate amount claimed in them	$10,197,978.75
Cases now pending (exclusive of subnumbered cases)	4,098

Chinese Indemnity Cases.

These are claims growing out of the so-called "Boxer outbreak" in China in the year 1900.

In eight of these cases, claiming $8,477.65, the petitions were dismissed. In one, claiming $20,805, judgment was rendered in favor of the claimant for $12,702.90. This judgment is payable from the Chinese indemnity fund.

Departmental Cases.

Departmental cases involve questions referred by the heads of the various executive departments, under the act of March 3, 1883 (ch. 116, 1 Supp. R. S., 403), wherein they desire opinions of the court for their information and guidance.

Under this jurisdiction 11 cases, claiming $63,950, were heard, in which findings were filed by the court in favor of claimants in the sum of $24,830 and certified to the various departments from which the claims were transmitted.

During the year five claims have been referred to the court under this classification, and there are now pending 63 such cases.

Congressional Cases.

Congressional cases reach the court by reference of Congress under the acts of March 3, 1883, and March 3, 1887, commonly known as the Bowman and Tucker Acts. In these cases the court does not render judgment, but makes findings and reports the same to Congress. In addition to the large number of so-called Civil War claims, there are many others referred for findings where the claimants can

not bring action under that provision which authorizes the court to render judgment.

There is now pending, for example, a class of cases thus referred, some 67 in number, growing out of the alleged faulty construction or maintenance and drainage of the Illinois & Mississippi Canal, involving something over a million dollars.

Claims disposed of during the year	355
Amount claimed in cases disposed of (approximately)	$1,100,929.98
Amount awarded to claimants	$187,530.32
Cases filed during the year (exclusive of subnumbered claims filed under general docket numbers)	1,134
Approximate amount claimed in them	$9,920,623.41
Cases pending exclusive of subnumbered claims	3,352

Indian Depredation Cases.

Indian depredation cases arise under the jurisdictional act of March 3, 1891 (26 Stat. L., 851).

It has been the custom of Assistant Attorneys General in charge of Indian depredation cases to make reports for the years ending October 31. My report, however, is for the fiscal year, and in order that the Indian depredation report may conform thereto the business for this jurisdiction covers the period between November 1, 1912, and June 30, 1913, only.

Cases disposed of from Nov. 1, 1912 to June 30, 1913	321
Amount claimed in cases disposed of	$1,001,969.40
Amount recovered by claimants	$35,205.00
Cases reinstated since Nov. 1, 1912	25
Amount claimed in reinstated cases	$45,686.00
Number of cases pending	704
Amount claimed in pending cases	$3,258,760.67

French Spoliations.

Under the act of January 20, 1885 (23 Stat. L., 283), jurisdiction was conferred upon the Court of Claims to hear and report to Congress its findings and conclusions in the claims of such citizens of the United States, or their legal representatives, as had valid claims to indemnity upon the French Government arising out of illegal captures, detentions, seizures, condemnations, and confiscations prior to the ratification of the convention between the United States and the French Republic concluded on the 30th day of September, 1800.

Cases disposed of during the year	318
In favor of the United States	246
In favor of claimants	72
Aggregate amount found for claimants	$164,581.98
Cases pending June 30, 1913	1,996

UNITED STATES DISTRICT COURTS.

This bureau is charged with the general supervision of the defense of suits brought against the Government in the various district courts of the United States under the act entitled "An act to provide for the bringing of suits against the Government of the United States" (1 Supp. R. S., 559), as amended by the judicial code of March 3, 1911 (36 Stat. L., 1087).

During the year 7 cases went to judgment under this jurisdiction. In satisfaction of 2 of these Congress at its last session appropriated the sum of $26,778.92, and for judgments rendered in prior years the sum of $12,447.76. Five (5) cases have been dismissed, 3 stand on error to the Supreme Court, and 3 to the Circuit Court of Appeals. Since the jurisdiction was created 1,641 suits have been brought against the Government. During the past year 19 suits were commenced, involving in the aggregate the sum of $72,778.86. There are now pending 145 cases under this jurisdiction.

APPEALS TO THE SUPREME COURT FROM THE COURT OF CLAIMS.

During the past year 21 cases appealed from the Court of Claims were presented in the Supreme Court. Of this number 15 were appealed by claimants, 3 by the United States, in 2 the Government filed cross appeal, and in 1 case appeal was filed by an intervenor in the court below.

Of the 3 cases appealed by the United States 2 were decided in favor of the Government and 1 adversely. Of the 15 appeals by claimants 9 were decided in favor of the Government, 2 against it, 3 were dismissed, and in 1 no decision has been rendered.

There are now pending in the Supreme Court 15 cases appealed from the Court of Claims. Thirteen of these are appeals by the claimants in the court below and 3 by the United States.

THE COMMERCE COURT.

The Commerce Court continued throughout the fiscal year and disposed of several important matters, the most important of which were the Shreveport cases, in which the court upheld the power of the Interstate Commerce Commission over discriminations resulting from an improper relation between interstate and intrastate rates; and the Oil Pipe Line cases, in which the court set aside the order of the commission on the ground that the pipe-line amendment of the act to regulate commerce was unconstitutional. This case was appealed by the Government and the commission to the Supreme Court.

The total number of new cases filed during the year was 20, covering 8 separate subject matters.

The work of the court has been disposed of with expedition, but has not required the entire time of the judges; each of them has rendered substantial service in the relief of congested dockets in various circuits.

I. Commerce Court Cases Filed in Prior Fiscal Years but Disposed of in This Year.

18. Russe & Burgess. Dismissed for want of jurisdiction under authority of Proctor & Gamble *v.* United States (225 U. S., 282).

19. J. W. Thompson Lumber Co. Same.

38. Baltimore & Ohio R. R. Co. Sugar Lighterage case. Order of commission annulled. On appeal to Supreme Court and under advisement there.

41. A., T. & S. F. Ry. Co. Precooling and Preicing case. Dismissed. On appeal to Supreme Court.

56. Kansas City Southern Ry. Co. (forms of accounts). Dismissed. On appeal to Supreme Court and under advisement there.

58. Florida East Coast Ry. Co. Confiscatory Rate case. Same.

61. A., T. & S. F. Ry. Co. California Lemon Rate case. Dismissed. Affirmed on appeal to Supreme Court.

64. Davis et al. *v.* United States. Dismissed by consent.

67, 68. The Shreveport cases (intrastate rates). Dismissed. On appeal to Supreme Court and under advisement there.

70. Lehigh Valley R. R. Co. "Meeker" case (confiscatory rate). Dismissed.

II. Commerce Court Cases Filed This Fiscal Year and Disposition Thereof.

75–80, 85. The Oil Pipe Line cases (6 cases). Preliminary injunction granted restraining the order of the commission. On appeal to the Supreme Court and under advisement there.

81. Southern Ry. Co. case, involving Mobile wharfage rights. Dismissed by consent.

82. Southern Ry. Co. case, involving Norfolk-Newport News discrimination. Petition dismissed.

83, 94. United States *v.* Erie R. R. Co. (2 cases). Antipass cases. Under advisement.

84. United States *v.* Central Railroad Co. of New Jersey. Antipass case. Dismissed by consent.

85. (See 75, above.)

86. Louisville & Nashville R. R. Co. Bowling Green Discrimination case. Dismissed for want of jurisdiction. On appeal to the Supreme Court.

87. Illinois Central R. R. Co. New Orleans to Detroit "4th Section" case. Dismissed by consent.

88. Southern Pacific Co. San Francisco and Portland "4th Section" case. Awaiting decision of Inter Mountain case by Supreme Court.

89–93. The Tap Line cases (5 cases). Under advisement.

94. (See No. 83, above.)

CUSTOMS CASES.

The report of the Assistant Attorney General in charge of customs may be summarized as follows:

All customs litigation during this year has been in the Board of General Appraisers and the Court of Customs Appeals, the last of the circuit-court cases having been disposed of during the preceding year.

The following table shows numerically in parallel columns the volume of litigation during the year in the Court of Customs Appeals, as compared with others, since the establishment of that court. The percentage of success in behalf of the United States has been steadily growing.

	1910	1911	1912	1913
Cases decided on argument:				
Won by the United States	106	133	132	116
Won by the importers	74	89	83	60
Total	180	222	215	176
Issues involved in the above cases decided on argument:				
Won by the United States	68	113	126	110
Won by the importers	46	75	71	55
Total	114	188	197	165
Percentage won by the United States	59.6	60.1	64.0	66.7
Cases decided without argument:				
Won by the United States	112	211	244	41
Won by the importers	158	28	49	30
Total	270	249	293	71

The above table presents the appellate work of the division; all appeals are from decisions of the Board of General Appraisers, which is the tribunal of first instance. A summary of the work there is appended, together with statistics of previous years since 1910.

	1910	1911	1912	1913
Hearings:				
At New York	1,942	2,514	2,860	2,934
At other ports	67	84	69	65
Total	2,009	2,598	2,929	2,999
Protests:				
Pending at beginning of year	95,220	116,[illegible]7	170,855	146,153
Received	65,951	121,187	96,099	58,061
Decided	45,085	66,419	120,801	98,483
Pending at end of year	116,086	170,855	146,153	105,731
Suspended at end of year	33,490	51,524	9,256	26,334
Reappraisements (before single general appraisers):				
Pending at beginning of year	425	621	590	906
Received	3,481	4,506	5,796	4,869
Decided	3,285	4,537	5,480	4,860
Pending at end of year	621	590	906	915
Re-reappraisements (on appeal to boards):				
Pending at beginning of year	105	137	194	234
Received	1,020	1,525	1,710	1,691
Decided	988	1,468	1,670	1,541
Pending at end of year	137	194	234	384

A special concern of the United States in this litigation is to shorten the time between the first protest on a given point and the final decision, in order to keep at a minimum the amounts the Treasury must refund.

The success of the Customs Division in this respect is shown by the fact that the average time between decision by the Board of General Appraisers and final decision has been reduced from 2 years and 1 month in 1910 to 8 months and 10 days in 1913.

BUSINESS TRANSACTED IN THE UNITED STATES DISTRICT COURTS.

Detailed statistics by districts will be given in the appendix.

Number of cases commenced during the year.

Civil cases to which the United States was a party	3,752
Criminal prosecutions by the United States	16,753
Admiralty cases	2,008
Other suits, to which the United States was not a party	9,175
Bankruptcy petitions filed	20,930
Total	52,618

Collections, judgments, fines, etc.

Collected by the United States in civil cases	$954,813.14
Collected by the United States in criminal prosecutions	689,276.05
Collected through the office of the Solicitor of the Treasury in compromise of claims not in suit	740,334.41
Total collected by the United States	2,384,423.60

Miscellaneous.

Judgments for plaintiffs in admiralty cases	582
Judgments for defendants in admiralty cases	41
Judgments for plaintiffs in other cases to which the United States was not a party	3,148
Judgments for defendants in other cases to which the United States was not a party	1,018
Total liabilities in bankruptcy cases closed during the year	$227,083,214.60
Total assets realized in bankruptcy cases disposed of during the year	$52,571,396.99

Number of cases pending close of June 30, 1913.

Civil cases to which the United States was a party	5,310
Criminal prosecutions by the United States	9,685
Admiralty cases	5,802
Other cases to which the United States was not a party	45,810
Bankruptcy petitions	35,405
Total	102,012

OPINIONS.

During the fiscal year 1913, 65 opinions were rendered upon questions of law, 12 upon requests of the President, and 53 upon requests of the heads of departments.

Title Opinions and Condemnations.

There have been rendered 231 opinions respecting title to lands acquired by the United States; 175 of these related to land obtained by purchase, or matters growing out of the same, and 56 covered cases in which condemnation was found necessary. The total value of the property involved was about $3,000,000.

On the title to approximately 650,000 acres of land, the acquisition of which has been heretofore authorized by the National Forest Reservation Commission under the provisions of the Weeks Forestry Act, considerable work has already been done, both in the way of investigations of title and supervision of condemnation suits instituted in connection therewith.

Under the act approved June 25, 1910, making provision for the enlargement of the Capitol Grounds, proceedings were instituted September 16, 1912, in the Supreme Court of the District of Columbia for the purpose of condemning 9½ squares desired in connection with that project. The award of the commission appointed therein was returned to the court January 29, 1913, confirmed by it February 24, 1913, and the appropriation therefor by Congress became available upon the approval of the sundry civil act June 23, 1913. Since then the matter has been held for further action pending consideration.

PUBLIC LANDS DIVISION.

At the beginning of the fiscal year there were pending in the courts approximately 831 civil and 255 criminal cases involving public lands. During the year 262 civil and 84 criminal cases were begun, and 419 civil and 124 criminal cases were terminated .

Of the civil cases, 211 were decided in favor of the Government; 84 were compromised; 58 were lost; and 70 were discontinued, leaving 674 pending at the close of the year. In the criminal cases there were 84 convictions and pleas of guilty; 73 defendants were discharged on orders of nolle-pros and 28 by acquittal, quashing of indictments, etc.; 215 criminal cases remained pending as to one or more defendants at the close of the year.

In addition to the collection of $848,627.09 in suits growing out of the Oregon & California Railroad grants and compromised as explained below, the Government recovered damages in the aggregate amount of $315,516.87, with costs amounting to $20,969.57

Collections on civil judgments entered during the last and earlier fiscal years, including compromises of suits—the Oregon & California Railroad grant matters excluded—amount to $149,211.35. Judgments in criminal proceedings were obtained for $20,273.07 in fines and $5,313.29 in costs. Collections on account of fines and costs entered in criminal cases in the last and earlier fiscal years amount to $18,297.64. Unlawful inclosures were removed, by decrees of court, from 126,331 acres of the public domain; title to 28,588 acres was cleared through ejectments and annulments of patents, and in the main suit against the Oregon & California Railroad Co. (see *infra*) judgment was obtained in the trial court for 2,364,000 acres, approximately.

Of proceedings relating to Indian lands there were, at the beginning of the fiscal year, approximately 2,015 civil and 54 criminal cases. Most of the civil cases, some 1,559, arose from controversies over allotments made to members of the Five Civilized Tribes and to Indians on the White Earth Reservation, of which more specific mention is made in subsequent pages. During the year 176 civil cases were instituted and 270 disposed of, leaving 1,921 pending at the close of the year. Of the civil cases 222 terminated favorably and 39 adversely to the United States and 9 were discontinued; 10 criminal cases were instituted during the year and 35 disposed of, 14 by convictions and pleas of guilty, 1 by acquittal, and 20 by *nolle prosequi* and dismissal; 29 criminal cases were pending at the close of the year.[1]

During the year a number of cases have been settled without the necessity of instituting legal proceedings. In this way fences unlawfully inclosing 330,355 acres of public lands have been abated; $1,166.64 has been recovered on account of the illegal pasturage of stock within such inclosures and upon reservations; $13,147.26 as a result of timber trespasses upon the public lands; 6,500 as damages for the destruction of public timber by fires caused by negligence; and relinquishments have been obtained of five forfeited rights of way over public lands.

Oregon and California Land-grant Suits.

The nature and importance of this litigation have been sufficiently described in past annual reports. During the last fiscal year the taking of evidence in the main suit against the Oregon & California Railroad Co. was completed, and on April 29, 1913, it was submitted

[1] A "case" may include many transactions or causes of action. For instance, many thousands of Indian conveyances and of defendants not associated in interest are involved in some 300 suits in eastern Oklahoma. While a case is not classed as terminated until terminated as a whole, it may be fully disposed of as to some of the parties or as to much, or substantially all, of the subject matter before it is ended technically.

to the court on final hearing. A decision in favor of the Government was rendered and, on July 1, 1913, the final decree was entered adjudging that all of the lands still held by the railroad company at the time of the institution of the suit (specifically describing them), have become forfeited, and quieting the title of the United States as against all claims of the railroad company, its mortgagees, and trustees, and all other parties claiming under it. The lands thus reverting aggregate approximately 2,364,000 acres; their value may be in excess of $50,000,000. Counsel for the defendants have given notice of an appeal to the Circuit Court of Appeals for the Ninth Circuit.

Of the 45 suits instituted against individuals and companies who directly or through mesne conveyances had become the purchasers of lands from the railroad company, 25 were compromised by my predecessor in March last, pursuant to the act of August 20, 1912 (37 Stat., 320). It was the purpose of that act to permit protection to those (and their assigns) who, prior to April 30, 1908 (the date of the joint resolution instructing the Attorney General to institute the forfeiture proceedings) had bought patented lands from the railroad company in good faith and without knowledge of the statutory restrictions upon the company's power to convey, and who, taking all facts and circumstances into consideration, ought in equity and justice to be afforded protection. Accordingly, the act provides a time limitation of one year from its approval upon the institution of new suits concerning lands purchased before April 30, 1908, and not involved in any suit already pending, and authorizes the Attorney General to compromise any suit theretofore or thereafter instituted, save, of course, the main suit against the company, which is expressly excluded. It further provides that the compromises shall be accomplished through the medium of consent decrees of forfeiture, and that when such decrees have been entered, the purchasers may, within the six months following, secure patents to the lands so forfeited upon application to the Secretary of the Interior and payment to the United States of $2.50 per acre.

As the act does not provide any procedure for ascertaining the facts bearing on the purchasers' good faith, etc., it was decided, with the concurrence of the parties seeking compromise, to resort to the plan of taking depositions *de bene esse* in the several cases proposed for compromise. A special examiner was appointed and the testimony of the witnesses, each duly sworn and subjected to cross-examination, was taken and transcribed. The evidence thus obtained, supplemented by any information available from other sources, affords a practical means of ascertaining whether a favorable exercise of the discretion reposed in the Attorney General would be warranted.

The total acreage included in the 25 compromises approved by my predecessor is 316,959.81 acres. Two cases have since been compromised by me, covering 22,491.04 acres. Decrees of forfeiture were rendered in all, and the money paid to the Government upon the subsequent applications for patents amounts to $848,627.09.

The lands affected by the 45 "purchaser suits" were only such as had been sold by the railroad company in quantities greater than 1,000 acres. No new suits have since been instituted, and consequently the titles of those persons (and their assigns) who purchased comparatively small areas, in technical violation of the granting acts, have been confirmed by the limitation provided in the third section of the Act of 1912.

Litigation Concerning Oil Lands Reserved by the President.

On September 27, 1909, and on several dates subsequent thereto, but prior to the approval of the act of June 25, 1910 (36 Stat., 847), which expressly declares the authority of the President to make temporary withdrawals of public lands for public purposes, a number of Executive orders were promulgated by direction of the President reserving immense areas of public petroleum lands in California, Wyoming, and other States from location, settlement, selection, filing, entry, or disposal under the mineral or nonmineral public-land laws. These reservations were very generally disregarded in California, also in Wyoming, and perhaps elsewhere. It is charged that a large part of the most valuable public oil lands sought to be reserved has been entered upon and is now being claimed by individuals and corporations under the mining laws. Much of the land has been exploited for its oil, and large quantities have been extracted and are being extracted from day to day in the State of California. To remedy this condition, three suits were begun against important operators in that State and a fourth in Wyoming, and many others are in prospect. The suit in Wyoming, being free from disputes of fact and other complications which embarrass the California litigation, was selected for the purpose of securing a speedy judicial determination of the President's authority to make the withdrawals. The bill was filed in February last; a motion to dismiss was interposed by the defendants late in March; the motion was argued and submitted in May; and on June 14 the district court rendered its decree dismissing the bill, upon the ground, as set forth in an accompanying memorandum, that the order of the President was ineffective to prevent the lawful location of the land in controversy under the mining laws. An appeal to the Circuit Court of Appeals for the Eighth Circuit was promptly sued out, and that court, early in October last, certified the principal questions to the

Supreme Court for answer. Upon motion of the Solicitor General the Supreme Court directed the sending up of the whole record, and has advanced the cause for hearing in January next.

Special counsel have been employed to conduct the cases pending, and other cases it may be necessary to institute, in California, Wyoming, or elsewhere, for the protection of withdrawn areas of oil land and also to secure accountings for oil wrongfully converted.

Suits Against the Southern Pacific Railroad Co. Concerning Oil Lands.

1. The principal suit concerning lands situate in the Elk Hills in the southern district of California, mentioned in the report for the last fiscal year, is almost ready for final hearing. Substantially all of the defendants' testimony and the Government's testimony in rebuttal has been taken, and it is hoped that in the very near future it will be possible to argue the case on its merits and obtain an adjudication.

2. The last report spoke of prospective litigation of great importance respecting oil lands in California claimed by the Southern Pacific Railroad Co. under patents containing express exceptions of all mineral lands other than iron and coal lands. The work of preparation then referred to was completed during the last fiscal year, as to one of the patents, which affects more known oil land than any of the others, and on December 20, 1912, suit was instituted asserting title to approximately 46,000 acres. This suit is pending on motions to dismiss the Government's bill of complaint upon the general grounds that were urged in the private suit of Burke *v.* Southern Pacific Railroad Company et al., now pending in the Supreme Court, and referred to in the last annual report. Suitable provisions have been made to expedite the litigation, to bring new suits, and to protect in every practicable way the Government's rights in the land and to the oil which has been and is being extracted from certain parts of it.

Sunk-Land Cases.

Since the last annual report, five more suits have been filed in the eastern district of Arkansas, to quiet the Government's title to areas of timberland in the northeastern part of that State which were erroneously returned in the official surveys as "lakes." These suits, affecting about 20,000 acres, followed the recent action of the Interior Department which corrected the original erroneous surveys by extending the subdivisional lines over the areas in question. It is expected that the test case referred to in the last report will be argued and submitted at the next term of court.

WATER RIGHTS.

The statement made in the last annual report (p. 41) concerning the importance of safeguarding the water rights reserved by the Government in the execution of the reclamation policy is approved. During the last fiscal year two attorneys, experienced in such matters, were engaged to act for the department in close cooperation with the Reclamation Service, and I am assured that much good has been accomplished through their efforts.

SUITS TO CANCEL UNLAWFUL CONVEYANCES OF INDIAN ALLOTMENTS.

Five Civilized Tribes.

During the year 3,390 conveyances were eliminated by dismissals, leaving the number still involved at its close 18,691. Of these dismissals 971 followed settlements in favor of the allottees, 1,942 were made necessary by decisions of the Supreme Court adverse to the United States in the cases of Mullen *v.* United States (224 U. S., 448) and Goat *v.* United States (id., 458), and 467 were based on other reasons. The attorney for the United States estimates that the average amount of land involved in each of the conveyances was 145 acres, of an average value of $10 per acre. Upon this basis the total recovery during the year for the allottees was 140,795 acres in land, or $1,407,950 in money value.

Quitclaim deeds have been executed in favor of the allottees and recorded in 734 additional instances. Corresponding dismissals, however, have been delayed awaiting necessary information as to the existence of other recorded encumbrances upon the tracts quitclaimed, as to whether those tracts are now occupied adversely to the allottees, and as to the accountability of the persons quitclaiming for rents and profits. Inasmuch as the Indian Office was unable to furnish this information, the department has determined to employ a number of men for that purpose.

The mandates from the Supreme Court in Heckman *v.* United States (224 U. S., 413), Deming Investment Co. *v.* United States (id., 471), and the Mullen and Goat cases, *supra*, were recorded by the trial court in July, 1912, and the pending cases were immediately set down for further hearing upon demurrers raising objections not determined by the court in the original decrees. The attorney for the Government had classified all the cases into groups, each dependent on one specific question of law touching the alienability of the land involved. After arguments the court took these questions under advisement and subsequently rendered decisions thereon from time to time, the last decision being rendered in November, 1912. Some of these decisions must be taken to the higher courts, and the question whether the provisions of section 3 of the act of June 25,

1910 (36 Stat., 836, 837), are sufficiently broad to admit of a direct review by the Supreme Court is now under consideration in the department. Some 3,000 answers and disclaimers have since been filed.

Approximately 10,000 of the conveyances originally in controversy have been dismissed out of this litigation since its inception upon the Government's motion, partly because of settlements made in favor of the allottees, partly because the information upon the faith of which some of the conveyances were attacked proved incorrect, and partly because of adverse holdings by the Supreme Court in certain of the cases above cited. The many thousands of conveyances which remain to be disposed of will require much judicial attention upon questions of fact as well as of law. One district judge can hardly deal with this great mass of litigation without practically abandoning all other work, and temporary assignments of additional judges will become imperative.

Seminole Nation.

On the suggestion of the department the appropriation for suits affecting title to Seminole allotted lands was decreased last year from $15,000 to $12,000. The latter amount having been found inadequate to meet all the needs of the work, the new estimate has been placed at $15,000.

The litigation under this appropriation is practically all in the State courts. Court expenses have generally been paid by the allottees, but in a few instances it has been found necessary to draw on the appropriation for such payments.

Seven criminal cases involving forgery of deeds to Indian lands were dismissed by the State's attorney during the past year without consulting the attorneys employed by the United States. One defendant was acquitted and one convicted.

Twenty-three civil cases were disposed of in favor of the Indians and three against them.

Our attorneys appeared in the Seminole County court on behalf of the allottees in 57 probate matters. Through their activities 83 tracts of land, aggregating 6,790 acres, were restored to Indian allottees and heirs by quitclaim deeds without suit.

The attorney in charge of the work reports that the forgery of deeds to Seminole allotments has ceased; that in all 11 men who formerly operated in Seminole County have been convicted and sentenced to the penitentiary; that others have been driven from the county, some have died, and a few, whose criminal prosecution is barred by the statutes of limitation, remain. He states further that all criminal matters relating to Seminole allotted lands of which the courts have not heretofore taken cognizance are barred by the statutes of limitation, and that few transactions consummated prior to 1910, aside from those now in court, remain to be litigated.

ALLOTMENTS IN THE WHITE EARTH INDIAN RESERVATION, MINN.

Since the beginning of this litigation, 1,271 suits have been brought involving 1,530 allotments. During the last fiscal year 21 cases were terminated by decrees in favor of the Government, 6 were dismissed after voluntary restitution of the land, 5 were decreed against the Government, and 17 were dismissed on the Government's motion; 892 are at issue, 677 have been referred to an examiner for the taking of evidence, and much of the evidence has been taken, largely by way of agreed statements of fact.

Questions of fraud aside, the validity of a very large proportion of the conveyances involved in this litigation depends upon the meaning of the term "mixed-blood Indians," found in the so-called Clapp amendment to the act of June 21, 1906 (34 Stat., 325, 352). In June, 1912, in three test cases, the district court held that a one-sixteenth part of white blood was not sufficient, but that a one-eighth part of white blood was sufficient, to constitute an Indian a "mixed-blood," deciding two cases in favor of the Government and the third for the defendants. These test cases were promptly taken to the Circuit Court of Appeals for the Eighth Circuit and were argued to that court in January last.

On November 13, 1913, that court disposed of all three cases contrary to the Government's contention, holding—

> That every Chippewa Indian who has an identifiable mixture of other than Indian blood, however small, derived from an ancestor or ancestors that had other than Indian blood, is a mixed-blood Indian, and all other Chippewa Indians are full-blood Indians within the true intent and meaning of the Act of Congress of June 21, 1906 (34 Stat., 353), and the other acts of Congress relating to this matter.

The cases will be appealed at once to the Supreme Court.

BUREAU OF INVESTIGATION.

During the past fiscal year the work of this bureau has steadily increased, especially in connection with investigations of violations of the criminal laws.

The comparatively recent enactment of sections 238, 239, and 240 of the Criminal Code, regulating the shipment of intoxicating liquors, and the passage of the acts of July 31, 1912, prohibiting the importation and interstate transportation of films and other pictorial representations of prize fights, and of February 13, 1913, providing for the punishment for the unlawful breaking of seals of railroad cars containing interstate or foreign shipments, the stealing of freight and express packages, etc., in process of transportation in interstate shipment, have all resulted in additional work for agents of this bureau.

Violations of the National Banking Laws.

The force of expert accountants connected with the Bureau of Investigation has reached a high state of efficiency and these officers have done especially effective work in the investigation of alleged violations of the national banking laws. During the past year there has been close coöperation between the department and the office of the Comptroller of the Currency in the prosecution of defaulting bank officers. Under instructions from the comptroller, the national-bank examiners and receivers of defunct banks report directly to the appropriate United States attorney all irregularities coming to their attention from time to time which appear to fall within the purview of the criminal provisions of the banking laws. This enables the United States attorney of the district in which the bank is located to act quickly if there is danger that material evidence may be destroyed or that prospective defendants may abscond. Copies of these incriminating reports are promptly transmitted to the comptroller and in due course referred by that official to the office of the Attorney General for consideration. If the facts so reported justify action by this department, expert bank accountants of the Bureau of Investigation are assigned to further investigate the affairs of the bank or banks involved and to assist the respective United States attorneys in the preparation of the cases for prosecution. This system has been found to be highly satisfactory in practical operation. The accountants of the bureau have also been employed to good advantage in numerous cases arising under the postal laws, bankruptcy laws, and the antitrust laws.

Investigations of violations of the national banking act and of matters involving the use of the mails to defraud in which this bureau has been engaged have averaged monthly approximately 19 and 17, respectively, in nearly all of which the accountants have performed the bulk of the work.

Antitrust Law.

During the past year the special agents have been engaged in the investigation of a monthly average of more than 36 complaints of alleged violation of the antitrust law. In many instances the investigation has failed to disclose facts which would justify the institution of formal proceedings, but notice of the activity of the Government has impelled officers of large industrial corporations to curtail dangerous tendencies. Many of these investigations are country-wide in scope, and, wherever practicable, the work is distributed among a large number of agents, who are permanently located in diverse parts of the country, so that results may be more quickly obtained and the cost of the work kept at a minimum.

Investigations of Judicial Conditions.

During the past year the Bureau of Investigation has participated in two very important investigations involving alleged misconduct on the part of members of the Federal judiciary, namely, Robert W. Archbald, formerly additional circuit judge for the third judicial circuit and designated a judge of the Commerce Court, and Emory Speer, district judge for the southern district of Georgia. The former was impeached by the House of Representatives July 11, 1912, and convicted of the impeachment by the Senate on January 13, 1913. The charges against Judge Speer have been thoroughly investigated and the evidence developed in the course of the investigation submitted to the Committee on the Judiciary of the House of Representatives.

Violations of the Neutrality Statutes.

The continued disturbed condition of affairs in the Republic of Mexico has made constantly necessary a large amount of work along the border between that country and the States of Arizona, New Mexico, Texas, and California, and has resulted in the bringing of a large number of criminal prosecutions, mostly for violation of the joint resolution and proclamation of March 14, 1912, forbidding the exportation of munitions of war to Mexico.

Bucket-shop Cases.

The so-called bucket-shop cases, which were instituted in the District of Columbia in 1910, were finally disposed of by the acceptance on February 7, 1913, of pleas of guilty from the principal defendants in the Cella case, and the payment of fines aggregating $50,000 and by the acceptance on March 11, 1913, of like pleas from the principal defendants in the Price case and the payment of fines aggregating $20,000.

The outcome of these cases has been very gratifying and it is believed that as a result of the prosecution for the first time of the principals of the parent companies which operated in the District of Columbia through branch offices, the bucket-shop evil has been driven out of it.

In none of the cases did the defendants stand trial, and the fines paid aggregated $78,100.

Peonage Cases.

A considerable number of investigations of alleged violations of the peonage laws and of criminal violations of the bankruptcy act have been made, some of them of great importance and extent. Of these classes of cases, there has been pending a monthly average of 7 and 8, respectively.

Other Important Cases.

Among the important cases in which extensive work was done by the bureau during the last fiscal year were the cases of the United States *v.* Charles E. Houston and John H. Bullock, in the western district of Washington, in which the defendants were convicted of conspiracy to defraud the United States in connection with certain contracts for furnishing coal to the Government for use in Alaska; the so-called dynamiting cases in the district of Indiana, in which 38 defendants, including the principal officers of the International Association of Bridge and Structural Iron Workers were convicted of conspiracy to export explosives in violation of the interstate commerce laws, and 32 sentenced to terms in the penitentiary ranging from 1 to 7 years; and the investigations of matters affecting the title to certain Indian lands on the White Earth Reservation in Minnesota which have been carried on continuously and are now nearing completion.

Examination of the Offices of the United States Court Officials, Etc.

During the fiscal year 1913, in addition to completing a number of examinations begun in the prior fiscal year, examinations of the offices of officials of the United States courts were commenced in 38 judicial districts, which examinations with two exceptions have since been completed. The number of such examinations commenced or completed, or both, in the prior fiscal year was 24. In addition to these general examinations, examinations of certain offices in four other districts were undertaken and 22 special investigations with reference to the conduct of different court officials or other miscellaneous subjects were made, and 4 special investigations to test the accuracy of the accounts of certain marshals, deputy marshals, and commissioners were undertaken in as many districts.

The following matters, which transpired in the fiscal year 1913, as a result of the work of the Bureau of Investigation of this character, are worthy of special mention:

California, northern.—Former United States Commissioner H. L. Ford, who it was found had been receiving money from accused persons, after indictment, but while cases against them were still pending before him as such commissioner, was indicted. The cases are still pending.

Georgia, southern.—In view of the condition of the docket, Judge Grubb, of northern Alabama, was assigned to hold court and cleared up the docket to a considerable extent.

Iowa, southern.—The first case instituted on the bond of E. R. Mason, former clerk of the circuit court, has been decided, resulting in a judgment for the United States in the sum of $752.62.

with interest. Upon the evidence of the defendant, Mason, the court held for the defense as to moneys covered by bonds of former sureties. The other two cases have not yet been tried.

Kentucky, eastern.—A United States commissioner was found to have been padding his accounts quite extensively. This matter has recently been referred to the United States attorney for an expression of his views relative to prosecution.

Louisiana, eastern.—Two deputy marshals were found to have padded their accounts. Since the close of that fiscal year each has been suspended for a period of 30 days.

Michigan, eastern.—The case against Walter S. Harsha, formerly clerk of the circuit court, terminated in a judgment for the United States under which Mr. Harsha paid into court $11,862.87, the same being the full amount of judgment, interest, and costs. In this case the court held for the Government on most of the points at issue.

It was also found that a sum of $935 had erroneously been paid out of the registry by Mr. Harsha under decree of court some 18 years ago. This matter is now in correspondence with a view to settlement without suit.

Mississippi, southern.—An examiner found that a deputy clerk at an outlying point was about $200 short in his account of fee deposits. The amount was made good and the young man immediately resigned and left the country.

New Jersey.—The amount of about $29,000, due on the bond of former Circuit Clerk Oliphant, has not been paid in and matters are progressing toward the institution of a suit.

Pennsylvania, eastern.—Like conditions as in New Jersey obtain as to the sum of about $1,200 due the Government from William H. Merrick, former clerk of the circuit court of appeals. Negotiations for compromise have begun.

Pennsylvania, middle.—An examiner found that a deputy marshal has been padding his accounts. The same deputy was found at the last previous examination to have been making personal use of the cost funds. This matter is now pending.

Tennessee, eastern.—The resignation of a deputy marshal was required on account of personal conduct reported by an examiner.

Washington, western.—Samuel D. Bridges, former clerk of the circuit court, was convicted of embezzling registry funds. Since the beginning of the present fiscal year he has been sentenced to 18 months in the McNeil Island Penitentiary and has taken an appeal. The amount due on his bond has been collected from the surety company.

West Virginia, southern.—The district clerk was reported to be some $2,900 short in his account of fee deposits, which amount was made good as soon as it was ascertained by an examiner. The matter of certain other conduct of this clerk is now pending before the judge.

At the present rate of progress it is believed that within a comparatively short time it will be possible to make a full examination in each of the judicial districts once every two years or more frequently instead of once in four years, as has been the case in the past, and

further, that it will be practicable to include the offices of referees in bankruptcy in general examinations about the close of the calendar year 1914.

The necessity for an examination of referees' offices has been shown by isolated examinations already made and the data which from time to time has been presented to the examiners of the department.

PROPOSED AMENDMENT TO THE BANKRUPTCY ACT.

Amendments to the bankruptcy act should be enacted concerning matters of fees and costs as mentioned in the report of my predecessor for the fiscal year 1912.

The attention of the department has been called to certain undistributed balances of funds in so-called closed bankruptcy estates in the southern district of Georgia, where it appears that balances of from 1 cent to $337.95, totaling $5,482.78 have remained in the custody of court officials where claims have not been paid in full, and, for some reason—presumably because of the large number of creditors—have been considered undistributable. Some appropriate legislation to correct this condition seems worthy of careful consideration.

Proposed Changes Relating to the Offices of Clerks of United States District Courts.

Emphasis is given to the suggestion of my predecessor as to the importance of a revision of the act of February 13, 1911, entitled "An act to diminish the expense of proceedings on appeal and writ of error or of certiorari," in order to clarify the situation as to the proper fees of court officers.

The District of Columbia is the only district in the United States in which the offices of the attorney and clerk of court are organized on a basis entirely different from that which obtains elsewhere. The accounts of the clerk of the District Supreme Court are examined by an auditor appointed by the court, whose examination does not appear entirely satisfactory. Action is taken by the court upon the report of the auditor, which is final and conclusive upon accounting officers. There is no opportunity for the departmental supervision which has proven so salutary in other districts. The office of the United States attorney is still upon the old emolument basis, under which the attorney and his assistants are paid from a sum appropriated from the earnings of the office.

There is no sufficient reason why these offices should remain in a status different from like offices elsewhere, and respectfully recommend appropriate legislation.

Attention is also invited to the fact that in 12 districts of the United States the clerks of the district courts, and also in some of

these districts the marshals, are authorized by law to charge and collect for their services double the fees taxable in other districts. In two of these districts the clerk of the court is limited to a maximum compensation of $3,500 per year, while in the other ten the limit is $7,000. The following statement, which does not include the earnings of the clerks in naturalization matters, shows the gross earnings approved, expenses approved, and net earnings approved for these clerks in the fiscal year 1913:

District.	Gross earnings approved.	Expenses approved.	Net earnings approved.
	Single maximum.		
Arizona	$9,569.77	$2,766.68	$6,803.09
New Mexico	12,753.35	1,805.58	10,947.77
	Double maximum.		
California, northern	$24,435.47	11,617.67	12,817.80
California, southern	18,920.75	9,629.28	9,291.47
Idaho	8,300.05	1,118.60	7,181.45
Montana	14,163.85	4,443.05	9,720.80
Nevada	5,183.97	1,543.00	3,640.97
North Dakota	9,837.65	2,815.85	7,021.80
Oregon	19,093.23	6,628.07	12,465.16
Washington, eastern	12,818.43	5,050.52	7,767.91
Washington, western	25,297.40	12,368.89	12,928.51
Wyoming	10,096.80	2,434.40	7,662.40

Violations of the White-slave Traffic Act.

During the past year the work of the department in connection with the enforcement of the provisions of the white-slave traffic act has been vigorously carried on under the supervision of the special commissioner for the suppression of the white-slave traffic, who has employed in this work the services of a number of special agents of the Bureau of Investigation of the department, and also a corps of local white-slave officers, who are stationed at most of the principal cities of the country and through whom a large amount of useful information has been obtained with reference to violations of this law.

During the period from June 25, 1910 (the date of the passage of the white-slave traffic act), to September 30, 1913, there have been 633 convictions under the act mentioned, more than one-half of which were obtained during the last 12 months of said period. During this period there have been but 93 acquittals and there were pending on the first day of October 177 cases in which the defendants were under indictment.

The sum of $175,000 of the appropriation of $475,000 for "Detection and prosecution of crimes" has been set apart for this work, and effort is being made to utilize this money to the best possible advantage, particularly in the prosecution of interstate white-slave cases which involve the element of traffic or commercialism. The

department feels that very material progress has been made, particularly during the past year, in suppressing the most vicious features of the traffic.

PARDONS.

The report of the attorney in charge of pardons shows the number of applications for clemency considered during the year and the number of applications granted, denied, and pending to be as follows:

Cases pending July 1, 1912		70
Cases filed during the year ending June 30, 1913		625
Cases reopened, filed in prior years		36
Total number of cases for consideration		731
Applications granted:		
Pardons	20	
Conditional pardons	1	
Sentences commuted	95	
Sentences commuted conditionally	5	
Fines remitted	12	
Fines and costs remitted	3	
Costs remitted	1	
Respites granted	10	
Pardons, after sentence served, to restore civil rights	47	
Pardons to restore rights of citizenship to deserters from the Army and Navy	14	
		208
Applications denied		75
Total number of cases acted on by the President		283
Cases adversely reported by district attorneys and judges		253
Cases filed without action		71
Cases pending June 30, 1913, including those wherein reports had not been received or which were awaiting further information from other sources		124
Total number of cases disposed of or pending		731

SOLICITOR OF THE TREASURY.

The report of the Solicitor of the Treasury shows that there were instituted during the past fiscal year 1,505 civil suits for the recovery of a total sum of $7,713,117.13, and that judgments in favor of the United States were rendered in such cases and those brought prior thereto amounting to $569,064.40. Collections in civil cases aggregated $817,740.45, which, with $752.30 collected on civil claims without suit, makes a total of $818,492.75.

In addition, fines aggregating $896,193.83 were imposed in 3,520 criminal cases and fines collected during the fiscal year amounted to $733,510.75. Claims were settled by compromise upon payment of the sum of $753,349.14, and there was deposited in the Treasury from moneys remaining in court registries, under sections 996 and 4545, Revised Statutes, the additional sum of $43,079.34, making the total

amount collected and deposited in the Treasury under the direction of this office $2,348,431.98.

There were 5,710 bonds, contracts, etc., examined and 197 written opinions rendered by the office, in addition to numerous verbal opinions given and other matters disposed of which can not well be tabulated.

SOLICITOR OF THE DEPARTMENT OF COMMERCE.

Summary of the report of the Solicitor of the Department of Commerce is as follows:

Summary of work done, fiscal year July 1, 1912, to July 1, 1913.

Contracts examined (approved, disapproved, drafted, redrafted, modified, involving expenditures amounting to $1,157,706)	298
Contracts examined (indeterminate amounts)	68
Leases (approved, disapproved, drafted, redrafted, modified, involving expenditures amounting to $201,983)	124
Revocable licenses (approved, disapproved, drafted, redrafted, modified, involving expenditures amounting to $5,327)	19
Insurance policies (in the sum of $200,000)	3
Bonds (approved, disapproved, drafted, redrafted, moified, involving expenditures amounting to $1,690,637)	1,285
Legal opinions rendered, formal and informal (memorandum)	336
Claims, injured employees compensation act (involving examination as to law and facts)	1,684
Miscellaneous matters, embracing everything submitted for the advice or suggestion of the solicitor, or for the formulation of departmental action, not included in the foregoing items	794

UNITED STATES PRISONERS.

The number of United States prisoners in confinement in the United States penitentiaries at Atlanta, Ga.; Leavenworth, Kans.; and McNeil Island, Wash.; the Government Hospital for the Insane; the National Training School for Boys; and in State institutions other than county jails on June 30, 1913, was 2,937 as compared with 2,751 on June 30, 1912, an increase of 186. Of the 2,937 in confinement on June 30, 1913, 2,258 were confined in the United States penitentiaries at Atlanta, Ga.; Leavenworth, Kans.; and McNeil Island, Wash.; and of the 470 confined in State penitentiaries 66 were confined in institutions which received prisoners for terms of less than one year; 82 were confined in the National Training School for Boys at Washington, D. C.; and 48 in State reformatories and house of correction. There were 127 prisoners transferred for treatment to and confined in the Government Hospital for the Insane.

The following table shows the number of prisoners received in the United States penitentiaries, in State penitentiaries, the National Training School for Boys, the State institutions for juveniles, house

of correction, etc., for the fiscal year ending June 30, 1913, with other statistics relating thereto:

	United States institutions.	State penitentiaries.	State reformatories and houses of correction.	Total.
In prison July 1, 1912	2,550	83	143	2,776
Received from July 1, 1912, to June 30, 1913	[1] 1,233	349	[2] 237	1,819
Total in prison during the year	3,783	432	380	4,595
Discharged from July 1, 1912, to June 30, 1913	1,316	85	257	1,658
Remaining in prison June 30, 1913	2,467	347	123	2,937
Released:				
By expiration	906	64	244	1,214
Paroled	265	14	5	284
Died	21	1	.....	22
Pardoned or commuted	40	4	1	45
Transferred to United States penitentiaries, State institutions, and insane asylums	37	1	3	41
By habeas corpus or order of court	39	.....	.....	39
Escapes	8	1	4	13
Received during the year ending June 30, 1913:				
Violations of parole	3	.....	.....	3
Violations of revenue laws	146	21	37	204
Counterfeiting, etc	77	18	12	107
Violations of postal laws	364	18	44	426
Violations of pension laws	3	.....	1	4
Violations of Indian country liquor laws	79	4	30	113
Larceny	25	51	5	81
Murder or manslaughter	41	14	.....	55
Robbery, burglary, and housebreaking	58	89	.....	147
Assault with intent or with a dangerous weapon	44	34	2	80
Violations, national banking laws	33	14	2	49
Violations of white-slave laws	148	24	35	207
Offenses other than those named	211	62	70	343
Nativity:				
Born in United States	994	287	161	1,442
Foreign born	238	62	76	376
Sex:				
Male	1,231	306	229	1,766
Female	1	43	8	52
Habit of life:				
Claim to be temperate	485	139	120	744
Admit themselves to be intemperate	747	210	117	1,074
Color:				
White	903	153	181	1,237
Colored	246	171	11	428
Indians and others	83	25	45	153
Education:				
Could read and write	1,044	265	146	1,455
Could read only	15	12	1	28
Could neither read nor write	173	72	90	335
Social relations:				
Married	580	161	129	870
Single	652	188	108	948
Previous convictions:				
In prison for first time	[3] 902	284	223	1,409
Heretofore served imprisonment	[3] 316	65	14	395
Age when admitted:				
Under 20 years of age	119	32	28	179
Between 20 and 30 years of age	504	166	88	758
Between 30 and 40 years of age	346	91	55	492
Between 40 and 50 years of age	152	43	35	230
Over 50 years of age	111	17	31	159
Of those in prison June 30, 1913:				
Idle	55	17	.....	72
Disabled or sick	206	6	.....	212
On piece-price plan	.....	194	.....	194
On State account	.....	60	45	105
On prison duties	2,206	70	78	2,354
Total working	2,206	324	123	2,653

[1] Includes 1 prisoner returned from escape who was reported in prior fiscal year.
[2] One prisoner convicted of two offenses.
[3] Does not include 14 prisoners in Government Hospital for the Insane, Washington, D. C. Information not known.

United States Penitentiary, Atlanta, Ga.

The number of prisoners in confinement on June 30, 1913, was 869, the average daily population being 881; the average daily population for the fiscal year 1912 was 833; the cost of maintenance of the penitentiary was $194,888.71; the average yearly cost of maintenance per man was $223.70; the daily cost was $0.613; the daily cost per prisoner for subsistence alone was $0.130; the yearly cost of maintenance per man for 1912 was $205.54, and the daily cost for that year $0.562, while the daily cost of subsistence alone was $0.111; the increase in subsistence was due to an increase in the average amount of meat furnished per ration and to a marked increase in the cost of food supplies.

During the year the prisoners were continued to be employed in connection with the erection of prison buildings, the cultivation of the prison farm, and the usual prison duties. The value of the farm supplies raised and used by the penitentiary during the year was $10,063.65. During the year there were 5 deaths, a decrease of 5 over the year before. The general health of the prisoners has been very good, due, as the warden says, to careful and efficient medical attention and to the practice requiring frequent physical exercise in the open air.

United States Penitentiary, McNeil Island, Wash.

The number of prisoners in confinement on June 30, 1913, was 226, the average daily number for the year being 216; the average daily population for the fiscal year 1912 was 221; the cost of maintenance of the penitentiary during the year was $46,753.54; the average yearly cost of maintenance per prisoner was $216.45; the daily cost was $0.593; the daily cost for subsistence alone per prisoner was $0.108, while the daily cost for the year 1912 was $0.112. During the year the prisoners were employed in connection with excavating and filling and cultivation of the farm and the usual prison duties. The value of the farm products is estimated to be worth $5,870. There were no deaths during the year. There is reiterated here what was mentioned in the annual report of my predecessor for the year 1912.

An inclosing wall is badly needed at this institution to prevent escapes and to avoid the expense of removing to other Federal penitentiaries prisoners of the more desperate class, whom it would be unsafe to confine at the McNeil Island Penitentiary in the absence of a wall. In the absence of a wall the prison is exposed to attack from the outside, and this is a constant source of real danger, when it is considered that the entire force of guards, both day and night, numbers but 12.

Criminal Identification Records.

During the year 15,437 criminal measurements were received, of which 12,535 were finger-print records and 2,902 anthropometric, otherwise known as Bertillon records. There are at present on file in this office 36,098 Bertillon records and 52,449 finger-print records and 90,383 criminal index cards. During the year 2,577 identifications were made, of which 1,294 were by the finger-print system and the remainder by the Bertillon system.

United States Penitentiary, Leavenworth, Kans.

The number of prisoners in confinement June 30, 1913, was 1,163, the average daily population being 1,171; the average daily population for 1912 was 1,083.

The cost of maintenance of the penitentiary during the year was $258,596.09, the average yearly cost of maintenance per man was $220.82, the daily cost, $0.605; the cost for subsistence alone was $0.147. The cost per man per day for maintenance in 1912 was $0.585, and the cost for subsistence alone was $0.13.

During the year the prisoners were employed in continuing the erection of prison buildings, in the cultivation of prison farms, and the usual prison duties. The average daily number of men employed upon construction work was 242.

The value of the farm products raised during the year and used by the penitentiary was $16,908.43. The value of the farm products consumed by the institution during the prior fiscal year was $13,989.67.

There were 12 deaths during the year, as compared with 8 during the year 1912.

National Training School for Boys.

The report of the board of trustees shows that there were confined in the school on June 30, 1913, 382 juvenile offenders, an increase of 11 over June 30, 1912. There were received during the present fiscal year 281 juvenile prisoners, an increase of 100 over the number received the year before. Of this number 179 were committed from the Juvenile Court of the District of Columbia, 3 from the Supreme Court of the District of Columbia, and 50 from United States courts other than the District of Columbia, an increase of 26 over the year before. There were 43 paroled prisoners returned to the school, and 5 juveniles who had escaped were also returned to the school. There were 3 deaths during the year as compared with 1 death during the year 1912.

One new family building was completed, thus providing additional space and relieving the somewhat crowded conditions in the other buildings. The school has now six family buildings.

During the year work on the new central school building was begun, and has been pushed as rapidly as its size and comprehensive plan will permit. The building will be sufficiently commodious to fill future requirements, and also enable the board of trustees to classify the inmates to much greater advantage than has heretofore been possible. Much of the work in connection with the construction of these buildings is done by the boys themselves under the direction of skilled foremen, all of which gives them useful employment, valuable instruction, and knowledge.

National Training School for Girls.

The report of the trustees for the National Training School for Girls shows that on July 1, 1912, there were 80 inmates. During the year there were 29 commitments, and 32 were paroled. The health of the inmates continues good. One girl died of tuberculosis. The board calls attention to the necessity for provision being made for the services of a parole officer. At the close of the year there were 124 girls on parole. One of the teachers was detailed to visit them, but with her other duties it was not found possible for her to make sufficient visits to accomplish the necessary results.

SUPPLY DIVISION.

During the fiscal year 1913 the Division of Supplies received from officials in the department and from the United States courts 5,840 requisitions for supplies, against 5,786 for the previous year. Upon these requisitions there were issued 2,376 purchase orders for supplies costing approximately $78,336.14.

In addition to the foregoing there was expended the sum of $3,310 under the appropriation "Federal Court Reports and Digests" and $1,890 under the appropriation "United States Supreme Court Reports and Digests thereof," authorized by sections 227 to 229 of the judicial code.

During the year 1,603 requisitions for printing and binding were drawn on the Public Printer, against 1,832 for the previous year. The total cost of printing and binding for the fiscal year 1913 was $45,483.27.

APPROPRIATIONS AND ESTIMATES.

A detailed statement of the appropriations for this department for the fiscal year 1913 will be given in the appendix.

The grand total of all appropriations for the department and the United States courts for the year was $10,965,580.43, of which substantially one-half was for expenses of the courts of the United States.

The appropriations for the current year are $10,354,166, and the estimates submitted for the next fiscal year are $11,097,677.50, an increase of $743,511.50.

THE SUPREME COURT.

Abstracts of Decisions at October, 1912, Term.

The following are abstracts of the most important cases not hereinbefore noted, in which the United States was a party or had an interest, decided at the October Term, 1912:

United States ex rel. Champion Lumber Company v. Fisher, Secretary of the Interior. (227 U. S. 445.)

The Secretary of the Interior refused to issue a patent to certain lands which had been finally entered under the homestead laws, because of the pendency of a protest alleging fraud. The sole question was whether or not such a protest existed. The Supreme Court held this to be a question of fact. The petition for a writ of error to the Circuit Court of Appeals of the District of Columbia was denied.

Ex parte United States, petitioner. (226 U. S. 420.)

In United States *v.* Terminal Railroad Association of St. Louis (224 U. S. 383) the Supreme Court held the Terminal Association to be an illegal combination in violation of the Sherman Antitrust Act, and ordered it dissolved and reorganized. The case had been heard before four judges of the circuit court under the Expedition Act of 1903. While the case was pending in the Supreme Court the Judicial Code was enacted. After the cause was remanded, the district judge, over the objection of counsel for the Government, held that the act creating the circuit courts had been repealed and superseded by the code, and that the plan to reorganize must be carried out in the district court, before a district judge. On a writ of prohibition, the Supreme Court held that the Expedition Act of 1903 had not been repealed, but that the powers of the circuit courts had been conferred upon the district courts, whose duty it was to execute the mandate.

Union Trust Company of St. Louis v. Westhus. (228 U. S. 519.)

This was an action to recover taxes levied under the War Revenue Act of June 13, 1898. The trial court found for the plaintiff. The Circuit Court of Appeals reversed the judgment. The plaintiff then sued out a writ of error, alleging, after setting up new matter, that a constitutional question was involved. The Supreme Court dismissed the writ.

Donnelly v. United States. (228 U. S. 243.)

Donnelly, a white man, was convicted of the murder of an Indian on an Indian reservation "extension" (Hoopa Valley) in the northern district of California. On a writ of error it was contended, among other things, that the "extension" was not lawfully established. If so, it was not "Indian country" within the meaning of section 2145, Revised Statutes, on which the indictment and conviction were based. The conviction was affirmed.

Hoke and Economides v. United States. (227 U. S. 308.)

The White Slave Traffic Act, approved June 25, 1910, was sustained, as a valid exercise of the power of Congress to regulate commerce, and as not an attempted interference with the police power of the State. The conviction and sentence of the plaintiffs in error for transporting girls in interstate commerce for immoral purposes were likewise sustained.

Bunker Hill & Sullivan Mining & Concentrating Co. v. United States. (226 U. S. 548.)

The homestead laws prohibit the cutting of timber from land before the entry is perfected. The Circuit Court of Appeals for the Ninth Circuit held that anyone buying and taking such timber was liable to the United States for its value. The Supreme Court affirmed the judgment.

United States v. Baltimore & Ohio Railroad Company. (229 U. S. 244.)

Under the so-called River and Harbor Act of 1899, a bill in equity was filed against the railroad to have a bridge declared an unreasonable obstruction to navigation, and for its removal as such. The bill was dismissed on the ground that the bridge was not subject to the act, and that its construction, in pursuance of the act of July 14, 1862, created a vested right to its use, of which the company could not be deprived without just compensation. A criminal proceeding was then instituted under section 18 of the River and Harbor Act. The company pleaded in bar the judgment of dismissal in the equity suit. The lower court sustained the plea, and the judgment was affirmed.

Matheson v. United States. (227 U. S. 540.)

Matheson was convicted of murder in the third division of Alaska. He challenged the validity of his conviction on the ground that the jurors were summoned for duty in the newly created fourth district before the act creating it had become effective, and not in the third. The Supreme Court held that the newly created district merely

fixed a new place for holding court, and that the jurors were properly summoned. The conviction was affirmed.

Nash v. United States. (229 U. S. 373.)

Nash was convicted of a conspiracy to monopolize and restrain trade and commerce in spirits of turpentine and rosin in violation of the Sherman Antitrust Act. The trial court had instructed the jury that while they should consider *all* of the means or methods alleged as tending to show a conspiracy, they might render a verdict upon *any one of them.* The Circuit Court of Appeals affirmed. The Supreme Court held that inasmuch as some of the means alleged did not warrant a conviction, the judgments of both courts must be reversed.

Jordan, Collector of Internal Revenue, v. Roche; Same v. Same. (228 U. S. 436.)

The defendants in error were held liable after the passage of the Foraker Act of 1900 for the payment of an internal-revenue tax on bay rum imported from Porto Rico.

Bugajewitz v. Adams, United States Immigration Inspector. (228 U. S. 585.)

The importation of aliens under the Immigration Act is a civil proceeding. The prohibition in the Constitution that no *ex post facto* law shall be passed may not be invoked in a proceeding to deport an alien.

MacLeod v. United States. (229 U. S. 416.)

A cargo of rice was imported into Cebu, P. I., during the military occupancy of those islands by the United States immediately following the War with Spain. At the time the military occupation did not extend to Cebu. At that point the duty on the cargo was paid to the de facto government of the insurgents. Subsequently, duty was again demanded and collected by the military authorities at Manila. The Supreme Court held the latter payment contrary to Executive orders and inconsistent with the principles of international law.

Southern Pacific Railroad Company v. United States. (228 U. S. 618.)

Under the so-called land-grant adjustment acts of 1887 and 1896, the Government sought to recover interest on amounts received by it from sales to bona fide purchasers of land which had been erroneously patented to appellant. The Supreme Court held: (1) The acts did not provide for the recovery of interest; (2) the right to recover

interest depended upon general principles of law; (3) the liability for interest did not attach until after the amount due the Government had been liquidated; (4) the interest should be computed only from the date of the commencement of the suit.

Lewis Blue Point Oyster Cultivation Co. v. Briggs. (229 U. S. 82.)

The company had planted and was cultivating oysters in the Great South Bay in the State of New York. In deepening the channel the Government plowed up the oyster beds. The Supreme Court held that the owner of the beds held its title subject to the paramount right of the Government to dredge the same as an aid to navigation, and such destruction of the beds was not a taking of property within the meaning of the fifth amendment.

United States v. Patten. (226 U. S. 525.)

Patten was indicted for conspiracy to run a corner in cotton on one of the great mercantile exchanges. The case is known as the "cotton corner case." Under normal conditions cotton is a subject of interstate trade and commerce. He was charged with intent to acquire control of all, or a dominant portion of, the cotton for the purpose of artificially enhancing its price throughout the country. The Supreme Court held that his acts were embraced within the terms of section 1 of the Sherman Antitrust Act.

Pico v. United States. (228 U. S. 225.)

Pico was convicted of murder and sentenced. On writ of error to the Supreme Court of the Philippine Islands he contended, first, that the complaint was insufficient to support the sentence; second, the Supreme Court of the Philippine Islands was without power to modify the sentence of the trial court. The conviction was affirmed.

United States v. George. (228 U. S. 14.)

Section 2291, Revised Statutes, requires proof "by two credible witnesses" in support of a homestead entry preliminarily to the issuance of a patent. On indictment of the entryman for perjury under section 5392, Revised Statutes, for swearing falsely, it was held that the statute required two credible witnesses other than the entryman himself. It was also held that an indictment does not lie for perjury based on a regulation of the General Land Office, which sought to enlarge the conditions imposed by the statute.

Omaha & Council Bluffs Street Railway Company v. Interstate Commerce Commission. (230 U. S. 324.)

The Interstate Commerce Commission entered an order against the street railway company, directing it to reduce its passenger fares be-

tween Council Bluffs, Iowa, and Omaha, Nebr. It was held that the ordinary interurban traction company was not embraced within the definition and meaning of the word " railroad " in the Act to Regulate Commerce.

Breese and Dickerson v. United States. (226 U. S. 1.)

The plaintiffs in error were indicted for conspiracy under section 5440, Revised Statutes, to embezzle the funds of a national bank. The Circuit Court of Appeals for the Fourth Circuit certified the question of the validity of the indictment, which had been attacked because of its return and delivery into court by the foreman of the grand jury unaccompanied by the jury. It was held that no prejudice had resulted to the plaintiffs in error and no constitutional right had been infringed.

Northern Pacific Railway Company v. United States. (227 U. S. 355.)

In describing the Yakima Indian Reservation, the treaty with the Yakimas of 1855 defined the western boundary of the reservation as running " southerly along the *main ridge* of the Cascade Mountains." Some of the natural objects referred to in the description of the boundaries generally, considered by themselves, indicated that an inferior ridge east of the main ridge might be the correct boundary. The Government alleged that certain lands between the two ridges had been erroneously classified as public lands open to entry when in reality they were a part of the Yakima Indian Reservation. It was held that the treaty makers had in mind the main ridge—the greater boundary of nature; that the lands formed a part of the reservation; and the patents were invalid.

Heike v. United States. (227 U. S. 131.)

Heike was convicted of conspiracy under section 5440, Revised Statutes, to commit frauds upon the revenue by effecting entries of raw sugar at less than their true weights. Prior to his conviction, he pleaded immunity from prosecution, because of testimony previously given by him before a Federal grand jury investigating alleged violations of the Sherman Antitrust Act. The acts of February 11, 1893 and February 25, 1903, provided that no person shall be prosecuted, etc., " for or on account of any transaction, matter, or thing, concerning which he may testify " in any proceeding, etc., under the Interstate Commerce and Antitrust Acts. Heike claimed that the testimony given by him before the grand jury concerned the subject matter of the indictment, and exempted him from prosecution. The plea was adjudged against him on the ground that the immunity statute was merely a substitute for constitutional privilege, beyond

which it should not be extended; that none of the evidence was self-incriminating or could have been withheld under any plea of constitutional privilege; and that it did not "concern" the weighing frauds. The judgment was affirmed.

Four hundred and forty-three cans of frozen-egg product v. United States. (226 U. S. 172.)

Under the Pure Food Act of 1906, which provides for the seizure and condemnation of adulterated or misbranded articles of food, the District Court of the United States sits as a court of common law when the seizure is made on land, and not as a court of admiralty. In libel proceedings under the act the action of the lower court is subject to review only as at common law, namely, by writ of error.

Interstate Commerce Commission v. Louisville and Nashville Railroad Company. (227 U. S. 88.)

The Interstate Commerce Commission entered an order reducing the class rates from New Orleans to Mobile, New Orleans to Pensacola, and New Orleans to Montgomery. The Commerce Court annulled and enjoined the order for lack of substantial evidence to support it. In reversing the judgment, the Supreme Court held that such an order without *any* evidence to support it was beyond the power of the commission, but that in the instant case there was substantial evidence in the record and the order of the commission was valid.

United States v. Winslow. (227 U. S. 202.)

The "United Shoe Machinery Co. Case." There had existed three separate groups or companies noncompetitively engaged in the manufacture of about 75 per cent of four different classes of patented machinery essential to the manufacture of shoes. Winslow and others were indicted under the Sherman Antitrust Act for combining the three separate groups into one group acting under the name of United Shoe Machinery Co. The Supreme Court held that the combination of three separate noncompeting groups into one noncompeting group did not constitute a violation of the act.

United States of America, upon the application of the Attorney General, at the request of the Interstate Commerce Commission, v. Union Stock Yard & Transit Company of Chicago; Chicago Junction Railway Company v. United States. (226 U. S. 286.)

Prior to 1907 the Union Stock Yard Transit Co., a corporation, owned and operated a stockyard and railroad business at the Union Stock Yards, Chicago. In that year it leased its railroad and railroad equipment to the Chicago Junction Railway Co., a corporation

organized to conduct a railroad business. By the terms of the lease the railway company was to pay two-thirds of the net earnings to the Stockyard Company as rental. The capital stock of the two companies was owned by the Chicago Junction Railway and Union Stock Yard Co., a holding company of New Jersey. The Stockyard Company sought to pay a bonus of $50,000 to a packing house on the condition that the latter maintain its plant and transact its business in the Union Stock Yards for a period of 15 years. The holding company guaranteed the performance of the contract. Neither the Stockyard Company nor the Junction Company published and filed their tariffs of rates and charges, though both were engaged in interstate commerce. The Government filed a bill alleging that the two companies were engaged in interstate commerce and sought to compel them to publish and file their tariffs of rates and charges under the Act to Regulate Commerce, and to enjoin the Stockyard Company from paying the bonus as a rebate. The Supreme Court held both companies subject to the Act to Regulate Commerce in all respects, and that the payment of the bonus was a discrimination and a rebate, which it ordered enjoined.

United States, Cincinnati and Columbus Traction Company, and Interstate Commerce Commission, v. Baltimore & Ohio Southwestern Railroad Company and the Norfolk & Western Railway Company. (226 U. S. 14.)

The Cincinnati & Columbus Traction Co. owned and operated an electric interburban railway running parallel with the tracks of the railroad company. It made application to the Interstate Commerce Commission for a switch connection with the tracks of those companies, which the commission granted. On bill filed, it was held that the track of the traction company was not "a lateral branch line" of railroad within the meaning of the Act to Regulate Commerce.

United States v. Adams Express Company. (229 U. S. 381.)

The Adams Express Co., a joint-stock association engaged in the express business, is a "common carrier" within the meaning of the Act to Regulate Commerce, and as such is subject to indictment for violations thereof.

Wheeler v. United States; Shaw v. United States; Wheeler v. Murchie, United States marshal; Shaw v. Same. (226 U. S. 478.)

Certain books and papers had been transferred to Wheeler & Shaw, Inc., which had been dissolved. A *subpœna duces tecum* was served on Wheeler and Shaw as individuals to produce the books and papers, to aid the grand jury in its investigation into alleged violations of the postal laws. They refused to produce the books, contending that

inasmuch as the corporation had been dissolved the books were their private property and their compulsory production was a violation of their rights under the search and seizures provisions of the Constitution. Wheeler and Shaw, as individuals and officers of the dissolved corporation, were adjudged in contempt and ordered to custody. The Supreme Court denied the contentions made by them and sustained the order.

McCoach, Collector of Internal Revenue, v. Mine Hill & Schuylkill Haven Railroad Company. (228 U. S. 295.)

The Supreme Court held, following Zonne *v.* Minneapolis Syndicate (220 U. S. 187), that a railroad corporation which had leased its road, but which maintained its corporate existence and collected and distributed to its stockholders the rental from the lessee and also dividends from investments, is not "doing business" within the meaning of the Corporation Tax Law.

United States of America v. Pacific & Arctic Railway and Navigation Company et al. (228 U. S. 87.)

Certain steamship and railway companies had established through routes and joint rates and formed one continuous line for the carriage of freight and passengers between the United States and Yukon River points in Alaska and Canada. These companies refused to enter into any rate arrangement with the independent company except on the payment of excessive charges. The District Court of Alaska sustained a demurrer to an indictment for conspiracy and combination in restraint of trade and commerce and for failure to establish through routes and joint rates with independent companies as with the other companies. On writ of error under the Criminal Appeals Act the Supreme Court reversed the judgment in so far as it found that no combination and conspiracy existed. It affirmed the judgment in so far as it found that the question of through routes and joint rates with independent carriers was a question primarily for the Interstate Commerce Commission.

United States v. Anderson. (228 U. S. 52.)

The Indian Appropriation Act of 1884 prohibited the sale by the Klamath Indians without the consent of the Secretary of the Interior of cattle purchased for them by the Government. The question arose as to whether this prohibition extended to cattle purchased and issued to the Indians in exchange for ceded lands under the Indian appropriation act of 1906 or whether it was limited to cattle purchased from the surplus subsistence appropriation under another provision of the former act. Sustaining the Government's contention,

the Supreme Court held that the prohibition extended to cattle purchased under the act of 1906, as otherwise the public purpose of protecting the Indians on their reservation and of keeping thereon cattle purchased by the United States would be defeated.

Jackson v. United States. (230 U. S. 1.)

Jackson owned a plantation in the Mississippi Valley. The Government constructed a system of levees and embankments along the Mississippi River for protection from overflows. In carrying on the work Jackson's lands were overflowed. He sued to recover damages upon the theory that the overflow constituted a taking of property within the meaning of the fifth amendment. The Supreme Court adjudged against him.

Hughes v. United States; United States v. Hughes. (230 U. S. 24.)

The question presented in this case was the same as that presented in Jackson *v.* United States, *supra.* The decision in that case was followed.

United States v. Mille Lac Band of Chippewa Indians in the State of Minnesota. (229 U. S. 498.)

In 1889 Congress passed an act in the interest of the Mille Lac Indians, to carry out certain treaty stipulations providing for the removal of the Indians to the Mille Lac Indian Reservation, and for the cession, relinquishment, and disposition of the lands formerly held by them. These lands were to be sold at a price named in the act and the proceeds deposited in the Treasury to the credit of the Indians as a trust fund. Such lands as to which there existed bona fide preemption or homestead entries were not to be sold, but were to proceed to patent under existing laws and regulations. Notwithstanding their ratification and acceptance of the provision of the act, the Indians insisted that the exemption from sale of these particular lands constituted an invasion of their rights therein, and they sought to recover their losses. The Supreme Court adjudged against them. The lands had been disposed of under the general land laws. The Supreme Court held that they should have been disposed of under the provisions of the act of 1889 and remanded the case for reassessment of damages.

Lewis Publishing Co. v. Morgan, postmaster in New York City; Journal of Commerce and Commercial Bulletin v. Burleson, Postmaster General of the United States. (229 U. S. 288.)

The Post Office Appropriation Act of 1912 required, first, the filing with the postal authorities and publication by the editors, owners,

etc., of newspapers, magazines, and other publications of a sworn statement giving their names and addresses, circulation, stockholders, etc., and, second, the marking of all paid-for reading matter, editorial or otherwise, as an advertisement. The act provided that "the privileges of the mail" shall be denied to such publications as fail to comply with the statute. The validity of the act was challenged on the ground that it abridged the freedom of the press and denied due process of law, in violation of the first and fifth amendmnts to the Constitution. The Supreme Court sustained the validity of the statute and the contentions of the Government with reference to the construction thereof.

Grant and Burlingame v. United States. (227 U. S. 74.)

Grant had refused to respond to a subpœna of a Federal grand jury to produce books and papers of a corporation left with him for safe-keeping by a client who claimed to be the owner thereof. It was held that the books were not privileged and, following Wheeler *v.* United States (226 U. S. 478), remained subject to inspection and examination when required by competent authority.

Johnson v. Hoy, United States marshal for the northern district of Illinois. (227 U. S. 245.)

Johnson was indicted for a violation of the White Slave Traffic Act, and his bail was fixed at $30,000. The court refused to permit the deposit of cash in lieu of bond and refused to accept anyone as surety who was indemnified against loss. Johnson applied for a writ of habeas corpus, alleging excessiveness of bail, and attacked the validity of the act on the ground that it was not a valid regulation of interstate commerce. The writ was denied. Pending the appeal Johnson was admitted to bail. The appeal was dismissed, the Supreme Court holding that it was a plain attempt to have the writ of habeas corpus perform the office of a writ of error.

United States v. Chavez. (228 U. S. 525.)

The joint resolution of Congress prohibited the exportation of arms and munitions of war to other American countries during times of domestic violence therein. The case turned on the construction of the word "export"; that is, whether it included the landing as well as the shipment to such foreign country, there having been in this case only a shipment. The Supreme Court held that landing in the foreign country was unnecessary, and that the purpose of the statute would be defeated by limiting the word to its strict technical meaning.

United States v. Wright. (229 U. S. 226.)

The act of January 30, 1897, forbade the introduction of spirituous liquors into Indian country. The Oklahoma Enabling Act of 1906 admitted Oklahoma as a State into the Union. The Supreme Court held that the act of 1906 did not repeal the act of 1907 in so far as it related to the introduction of liquor into the Indian Territory from points outside of that Territory but within what is now Oklahoma.

Swigart v. Baker. (229 U. S. 187.)

In this case the Circuit Court of Appeals for the Ninth Circuit held that the Secretary of the Interior has no authority, under the Reclamation Acts, to collect from water users the cost of maintaining and operating reclamation projects during the period intervening between the time when the projects come into operation and the time when they are to pass into the control of the water users' associations. The practice of making such charges began with the first of the projects thrown open under the act and had been continuous. Several millions of dollars had been collected under it. The decision of the Circuit Court of Appeals, if correct, would have required all of the projects to be maintained and operated for many years entirely at the public expense, which would have been enormous; the reclamation fund would have been seriously depleted, and the execution of the Reclamation Acts crippled.

The decree of the Circuit Court of Appeals was reversed by the Supreme Court, however, which was of the unanimous opinion that the charges were lawful.

United States v. Chandler-Dunbar Water Power Company; Chandler-Dunbar Water Power Company v. United States; St. Marys Power Company v. United States; Brown, receiver of the Michigan Lake Superior Power Company, v. United States. (229 U. S. 53.)

The Chandler-Dunbar Co. and others had erected and maintained certain structures and appliances in the St. Marys River for the control and use of the current for commercial purposes. They contended that because of the proprietary right in the bed of the river they had an inherent right to at least so much of the flow of the stream as was not needed for navigation. In reversing the judgment of the lower court the Supreme Court held that the flow of the stream was in no sense private property and that the public right of navigation was dominating and controlling. Congress having determined that the waters of the river were necessary for navigation, that determination operated to exclude forever from the river the structures necessary for the commercial use of the water power.

Standard Sanitary Manufacturing Co. v. United States of America. (226 U. S. 20.)

Sixteen corporations and 34 individuals were indicted for an unlawful combination and conspiracy to restrain interstate commerce in bathtubs, etc. The combination was effected by so-called "license agreements," under which the manufacturers, who had previously been independent and competitive, combined and subjected themselves to certain rules and regulations limiting the output and sales of their product. Patents were purchased, sold, and assigned, according to the convenience of the parties, for the purpose of effecting the combination. The trade was practically controlled from producer to consumer, the defendants controlling about 85 per cent of the total interstate and foreign trade. The Supreme Court sustained the contention of the Government that the whole scheme was an attempted evasion of the statute by a "resort to subterfuge of form," and ordered the combination dissolved.

United States v. Union Pacific Railroad Company. (226 U. S. 61.)

A statement of this case appears elsewhere in this report.

United States v. Reading Company; Temple Iron Company v. United States; Reading Company v. United States. (226 U. S. 324.)

A statement of this case appears elsewhere in this report.

JAMES C. MCREYNOLDS,
Attorney General.

REPORT

OF THE

POSTMASTER GENERAL.

DECEMBER 1, 1913.

To the PRESIDENT:

The Postmaster General has the honor to present his annual report for the fiscal year ended June 30, 1913:

POSTAL FINANCES.

The postal revenues for the fiscal year ended June 30, 1913, as reported by the Auditor for the Post Office Department, amounted to $266,619,525.65, an increase over the preceding year of slightly more than 8 per cent, as compared with a corresponding increase of less than 4 per cent for 1912. The marked gain in the percentage of increase in revenues is to be attributed to the operation of the parcel-post system that was inaugurated on January 1 last.

The audited expenditures for the year amounted to $262,067,541.33 and the adjusted losses by fire, burglary, etc., to $41,333.41. The excess of audited revenues over audited expenses and losses is reported to be $4,510,650.91. This reported surplus is based largely upon the audited accounts of the fiscal agents of the department showing their actual receipts and expenditures during the year, but does not represent the actual financial condition as it is derived from a comparison of amounts that are not properly comparable. It does not include obligations which were incurred but not paid within the year. On the other hand, it does include payments on account of obligations incurred in prior years.

The last actual postal surplus was announced by Postmaster General Gresham 30 years ago, when fair account was taken by him in the financial statement of the department of outstanding obligations. The practice of reporting outstanding obligations was continued by a number of his successors. In recent years, however, Postmasters General have stated the persistently recurring postal deficit in terms of the excess of audited expenditures over audited revenues, and have published as the financial statement of the depart-

ment the report of the Auditor for the Post Office Department (an accounting officer of the Treasury, whose duty it is to audit only actual receipt and disbursement of funds), without taking into account the outstanding obligations for the service of the year on which report is made. Although the overlapping payments on account of prior years compensate in a measure for the obligations incurred on account of the year for which report is made, but which are not paid until subsequent years, the element of error inherent in such a method of stating the financial condition arises from the effect of the natural growth of the service on the items of cost transposed. For this reason the payment for prior years tended always to be less than the corresponding outstanding obligations of the current year, and this practice of inaccurate statement has had the effect, therefore, of making the deficit announced each year less than the actual deficit. Unusual delay in certifying accounts for payment near the end of the fiscal year, although fully justified, also results in unduly increasing the payments in subsequent years with a like understatement in the accounts for the current year.

By the use of this faulty method a surplus of $219,118.12 was shown in the annual report of the Department for the fiscal year 1911, in which the claim was advanced that the service had finally been made self-supporting. Taking into account the outstanding obligations for that year, which were not reported, there was in reality a deficit of approximately $732,301.90. The actual deficiency for the year 1911, based on payments on account of that year which were made up to June 30, 1913, was $720,768.63, and obligations are still outstanding amounting to approximately $11,533.27.

This report states the audited surplus of $4,510,650.91, reported for the fiscal year 1913 by the Auditor for the Post Office Department, for what it really is, namely, the amount by which the audited revenues have exceeded the audited expenditures actually made within the current year. This is necessary and useful information, but it bears obliquely on the real financial condition. The following statement shows a more correct result of financial administration for the fiscal year 1913. Although it does not show the definite final result for the year, which can not be stated until all claims are settled, it is not thought that such final results will materially differ. From the audited expenditures have been deducted the payments on account of prior years. To the amount remaining and properly chargeable to this year's operation have been added the estimated liabilities for obligations incurred within and for the service of the year, but unpaid at the close of the year, which have been ascertained by means of carefully prepared estimates.

Statement of revenues and expenditures for the fiscal year 1913, based upon the estimated expense of the service for that year, irrespective of the time when payment was or is to be made.

Reported revenues	$266,619,525.65	
Charges against revenues for allowances to postmasters on account of fire, burglary, etc	41,333.41	
Net revenues		$266,578,192.24
Expenditures for general postal purposes from postal revenues, as reported by the Auditor for the Post Office Department	262,067,541.33	
Expenditures for parcel-post equipment from General Treasury funds	345,456.74	
Total	262,412,998.07	
Payments during fiscal year 1913 on account of prior years	8,389,435.15	
Expenditures for the fiscal year 1913	254,023,562.92	
Estimated outstanding obligations	8,712,722.54	
Estimated expenses for the fiscal year 1913 paid and payable		262,736,285.46
Estimated surplus for the year 1913		3,841,906.78

It is gratifying to report that on this basis the total expenses of maintaining the postal service for the fiscal year ended June 30, 1913, is found to be exceeded by the revenues for the same period, that there is an actual surplus of $3,841,906.78, and that the postal service is now for the first time since 1883 self-supporting.

However, it should be borne in mind that certain other factors of cost, such as the annual rental value of Federal buildings, fixtures, and equipment used wholly or in part for postal purposes, and the expenses incident to the conduct of the Post Office Department and the office of the Auditor for the Post Office Department, are not charged against the postal service, nor does the postal service receive credit for all functions performed—as, for example, free transportation of franked and penalty mail and the virtual subsidy of $50,000,000 on second-class matter, which, if accounted for, would much more than offset these costs.

For a statement of the audited revenues and expenditures attention is invited to the financial summary on page 44 of this report.

GENERAL POLICY.

The dominant policy of the present administration will be to conduct the postal service for the convenience of the public and not for profit. Its controlling purpose will be to promote efficiency by the complete standardization of the service, which will be attained by harmonizing equipment, adjusting the personnel, and securing the greatest possible cooperation in every quarter.

The prime consideration in perfecting the personnel of the postal service shall be to recognize efficiency and to eliminate partisanship. It is the earnest hope that ultimately all positions will be covered under the classified civil service and that merit and faithfulness will be the sole consideration in making appointments as well as promotions.

The same reasons that led to the adoption of the constitutional provision for a Government monopoly over the receipt, transmission, and delivery of mail matter make it improper to operate this service in accordance with policies characteristic of private enterprise. There is no incentive to private enterprise to extend service unless such extension will increase gross receipts in greater proportion than expenses. Therefore, successful commercial organizations are not proper models for the Post Office Department, except that the same modern business-like methods may in some instances be applicable to both. In the extension of service and in the imposition of charges the Government must be guided not by the consideration of profit but by the needs of the people, who have a right to expect the most efficient postal service administered in the most economical manner possible and made available to them at rates involving, for the service as a whole, no element of taxation. The service should be extended, with due regard for the exigencies of public finance, wherever its benefits, commercial and social, warrant the expenditure necessary, irrespective of whether or not the revenue from each extension will defray the cost thereof.

Postage rates should be fixed and readjusted from time to time with a view to an equitable distribution of total charges among the senders of different classes of mail on a basis that will promote the greatest usefulness of the service as a whole and secure, if feasible, a total revenue approximately equal to the total expenditure.

The postal service is universal; it should be uniform. Similar local requirements and conditions should be met by the same character and degree of service. Due regard should be had for such peculiar and special needs as may exist in some communities, but certainly service similar in general respects should be adequate for large classes of communities. A survey made in the opening weeks of the present administration disclosed the fact that service of differing kinds had been accorded communities whose requirements were in general the same. It has been the policy of the present administration not to withdraw service already in operation, but to adjust these inequalities in the enjoyment of postal facilities by judicious discrimination in authorizing extensions. An impartial administration requires a full recognition of this principle.

While extending in this manner to each community postal facilities adequate to its needs and similar to those rendered other communities

of like size, population, and relative importance, the department will endeavor to apply the principle of standardization to the internal affairs of the service. Not only should equipment be uniform, but the best method of performing each operation should be determined and adopted. This will insure to the service an elasticity that it now lacks and will conduce to flexibility of management by making it possible to shift personnel as well as equipment from point to point as the conditions may demand. The adoption of approved innovations throughout the service will be facilitated, thereby increasing efficiency and consequently reducing cost. Well-equipped experts of the department are now studying postal conditions in representative sections of the country. Their reports are being analyzed, and every suggested improvement found feasible and desirable will be promptly adopted and put into operation wherever practicable.

EXTENSIONS.

The reports of the four Assistant Postmasters General, to which attention is invited, will show in detail all extensions and enlargements of the service which have been made during the last fiscal year.

PARCEL POST.

Section 8 of the Post Office appropriation act for the fiscal year 1913 approved August 24, 1912, provides for the establishment of a general parcel post in the United States. (37 Stat. L., p. 557.)

Under this provision of law the parcel-post service was initiated and put into operation on January 1, 1913. The capacity of the postal organization to conduct successfully this important public utility is amply demonstrated by its rapid development and the effective service rendered.

Congress wisely delegated to the Postmaster General, subject in some instances to the approval of the Interstate Commerce Commission, broad discretionary power in administering the parcel-post law so that regulations thereunder might be promulgated and amended from time to time to meet promptly the conditions of emergency that might naturally arise in the service during its experimental stage, and to respond to the popular demand for cheaper and more general service by enlarging and elaborating the system and reducing charges as rapidly as the consideration of good administration might warrant. In view of the impossibility of foreseeing the conditions of actual operation, the regulations were in the beginning as a precautionary measure rigidly framed. However, as rapidly as experience has demonstrated that these regulations restrict unduly the operation of the service and its usefulness to the public they have been amended.

The growth of the parcel-post business has been phenomenal. During the first six months of its operation approximately 300,000,000 parcels were handled. The percentage of loss and damage has been relatively small, as has also been the number of complaints of delay or unsatisfactory service. The department has earnestly endeavored to avail itself of every possible means for reducing to a minimum the difficulties incident to taking over such a vast enterprise. Officers and employees have shown commendable zeal and resourcefulness in meeting every exigency that has arisen in connection with the service. The proper handling and prompt delivery of the more important classes of mail have not been impeded, and at the same time the parcel-post business has been conducted with gratifying celerity and dispatch.

When the service was inaugurated an issue of distinctive stamps was prescribed for the payment of postage on parcel-post mail. These stamps were not accepted for postage on other than fourth-class matter and the stamps used for other classes of mail were not accepted for postage on parcels. This restriction resulted in endless confusion and in great annoyance and inconvenience to the public The sales were not an accurate index, as they were intended to be, of the revenue derived from the parcel-post service, as the number of stamps outstanding in the hands of the public could never be definitely ascertained. The mandatory use of this special issue has therefore been discontinued and the announcement made that the present supply, until exhausted, will be accepted for the payment of all kinds of postage but that no further issues of distinctive stamps for parcel post will be authorized. This change has been favorably received by the public and the parcel-post service has by this means been rendered more popular. As a result the complaints on account of delay, nondelivery of parcels, and the loss of postage, due to ignorance of the distinctive stamp requirement, have been eliminated. The acceptance of parcel-post stamps for the payment of postage on other classes of mail has substantially reduced the cost of administration by enabling officers and employees to relax their vigilance in scrutinizing the kinds of stamps used. Undoubtedly public patronage of the postal service is simplified and facilitated by having a single variety of stamps valid for all purposes.

The advantages of doing away with the distinctive-stamp feature of the parcel post are clear and obvious and far outweigh the doubtful value of the stamps as a means for estimating revenue. The use of the distinctive stamps gave no basis for ascertaining the cost of the service or the volume of business and the revenue by zones. At a less expense, the revenue from the parcel-post service may be more accurately ascertained by test weighings and countings during brief periods at representative post offices. This is the usual method

of arriving at such statistics and it has the double advantage of not only showing by zones the revenue actually earned and received but also producing data from which the cost of performing the service is derived.

The parcel-post law provided for the indemnification of shippers, for articles injured or lost, by insurance. Accordingly the registration privilege was withdrawn from fourth-class mail on January 1, 1913, and the insurance privilege substituted. The regulations covering this feature provided that a parcel might be insured against loss in an amount equivalent to its actual value, but not to exceed $50, on the payment of a fee of 10 cents. Six months' experience demonstrated that the uniform charge for insurance regardless of the amount of the risk worked against the usefulness of the system. Accordingly on July 1 the regulations were amended so that a mailable parcel on which the postage is fully prepaid may be insured against loss in an amount equivalent to its value, but not exceeding $25, on payment of a fee of 5 cents, and in an amount equivalent to its actual value in excess of $25, but not to exceed $50, on payment of a fee of 10 cents. The insurance feature has proved popular and been largely patronized. During the six months' operation of the system to the close of the fiscal year more than 2,500,000 parcels were insured against loss.

Collect-on-delivery service was made available to patrons of the parcel post on July 1 last. This facility enables the senders of a mailable parcel on which the postage is fully prepaid to have the price of the article and the charges thereon collected from the addressee on payment of a fee of 10 cents, provided the amount to be collected does not exceed $100. Such a parcel will be insured against loss without additional charge in an amount equivalent to its actual value, but not to exceed $50. This feature of the service is believed to have had the effect of stimulating mail-order business by making unnecessary in many transactions the payment of money in advance by purchasers or the extension of credit on the part of sellers, and it has become very popular, owing to the promptness with which collections are returned to the senders. It is also believed that this service will prove a great convenience to our farming population when they accustom themselves to a larger use of the parcel post.

In view of the increase of postal revenues due to the operation of the parcel-post system, it was determined shortly after the close of the fiscal year to give to the people the benefit of this earning power in the form of reduced rates. The successful operation of the service also was held to justify an increase in the weight limit. Accordingly, on August 15, the rates for the first and second zones were reduced and the weight limit increased from 11 to 20 pounds. It

was thought proper that the increase in weight limit and reduced rate should apply to the first and second zones, as 30 per cent of the entire number of shipments were addressed to these zones, and by affording relief on this business the public would secure the benefits on approximately one-third of their shipments. The wisdom of this action has been shown by the fact that a record kept in a large number of representative offices from October 1 to 15, inclusive, shows that the volume of business has been substantially increased.

The experience gained in the operation of the system under this tentative revision has shown that a further reduction of rates and increase of weight limit is justified. With the increase in the volume of parcels mailed, the cost of handling has been reduced, and as the feasibility of taking care of a far greater amount of business has been demonstrated no reason remains for retaining rates that greatly exceed cost and are prohibitive of potential traffic, or from refraining from enlarging the weight limit. Accordingly, the department has submitted to the Interstate Commerce Commission a recommendation for increasing the weight limit in the first and second zones from 20 to 50 pounds and in the remaining zones from 11 to 20 pounds, and for substantially reducing the rates of postage in all zones except the first and second, which have already been revised, and the seventh and eighth, in which any reduction is not held to be justified at the present time. The recommendation has been approved by the commission, and the changes will become effective on January 1, 1914.

On account of the reduction of postage rates and the increase in the weight limit of fourth-class matter effected by the parcel-post act, it is probable that hereafter the mails will be used to a much greater extent for the shipment of gold from Alaska to the United States. This has had a material effect upon the cost of transportation, as shown by the proposals received under the recent advertisement for service for the new term. These proposals show that if gold be included in parcel-post mails under conditions applying to other articles of that class, the cost will be very much greater than if it is handled substantially as heretofore. Accordingly the consent of the Interstate Commerce Commission was requested and secured for a change in the regulations providing that gold, gold bullion, and gold dust in the mails in Alaska and to and from Alaska shall be packed in a suitable manner prescribed by the department and inclosed in sealed packages, each weighing not more than 11 pounds, and that the same be registered in the office of mailing; and that the rate of postage thereon shall be 2 cents an ounce or fraction thereof for all distances. Accordingly an order has been promulgated making these changes effective from January 1, 1914.

The parcel post was established for the manifest purpose of affording a cheaper means of transportation for mailable merchandise, and it was clearly the intention of Congress that this function should be limited in performance only by the considerations of cost and conservative postal administration. It is believed, therefore, that the parcel post should be made eventually to serve the people as fully and completely as possible without interfering with the efficient conduct of the postal service, and that changes in the regulations that will have the effect of increasing the volume of parcel-post mail should be made gradually and only after experience and investigation has shown that they may be put into effect without loss or detriment to the service.

The popularity of the parcel post can not be doubted. Its facilities are better and its rates are generally lower than those of the private companies, whose exorbitant charges and unsatisfactory service finally provoked an agitation so insistent as to overcome the legislative inertia behind which the express monopoly lay intrenched. Parcel post reaches everywhere, whereas private expresses extend their operations only to profitable territory. Twenty millions of rural residents now have house to house delivery and collection of parcels, a service formerly to be had only in cities and towns. The benefits of parcel post applied to the Rural Delivery Service work both ways. Manufactured articles and the means of culture and education are brought to the farm, while the smaller agricultural products are returned from the farm to the city, swelling the supply of the necessities of life and reducing the cost of living.

Under the law which confers large powers on the Postmaster General, the parcel-post service will be gradually developed and to such an extent that the department can be maintained on a self-supporting basis. The prodigious growth of this service, which will continue at an increasing rate as all the people for whose benefit it was established accustom themselves to its use, will so increase revenues that from time to time further reduction of rates may be had and additional increases of weight limit of parcels authorized. In consequence of carrying into effect this fixed policy of the department, an increased burden will be imposed on the railroads that are called upon to render transportation service. The railroads, of course, will become entitled to additional compensation for this extra service imposed upon them and the department is engaged in gathering all statistical data necessary for ascertaining a correct basis for fixing a just, fair, and adequate compensation for the service rendered.

The function of the Post Office Department is to serve the public, and it should not attempt profit making. It is expected that after

the allowance of proper compensation to railroads for all service rendered there will come annually hereafter as the result of the development of the parcel-post service an increasing surplus. It should be the policy of the department not to become a revenue producer for the Government, but from time to time to absorb this surplus by reducing the cost of the service, increasing its efficiency, and enlarging the means of communication between our people. The indication of largely increased postal revenues justifies a serious consideration at this time of the subject of adding the telegraph and telephone as a part of our postal service.

POSTAL TELEGRAPHS AND TELEPHONES.

A study of the constitutional purposes of the postal establishment leads to the conviction that the Post Office Department should have control over all means of the communication of intelligence. The first telegraph line in this country was maintained and operated as a part of the postal service, and it is to be regretted that Congress saw fit to relinquish this facility to private enterprise. The monopolistic nature of the telegraph business makes it of vital importance to the people that it be conducted by unselfish interests, and this can be accomplished only through Government ownership.

The act of July 24, 1866, providing for the Government acquisition of the telegraph lines upon payment of an appraised valuation and the act of 1902 directing the Postmaster General "to report to Congress the probable cost of connecting a telegraph and telephone system with the postal service by some feasible plan" are evidences of the policy of this Government ultimately to acquire and operate these electrical means of communication as postal facilities, as is done by all the principal nations, the United States alone excepted.

The successful operation of the parcel post has demonstrated the capacity of the Government to conduct the public utilities which fall properly within the postal provision of the Constitution.

Every argument in favor of the Government ownership of telegraph lines may be advanced with equal logic and force in favor of the Government ownership of telephone lines. It has been competently decided that a telephone message and a telegram are the same within the meaning of the laws governing the telegraph service, and therefore it is believed that the statute enabling the Government to acquire, upon the payment of an appraised valuation, the telegraph lines of the country, will enable the Government to acquire the telephonic network of the country. While it is true that the telephone companies have not complied with the requirements of section 5267, Revised Statutes, this can not be held to nullify the intent of the law, since the nonperformance on the part of the Gov-

ernment of any of its constitutional privileges in nowise surrenders the right to exercise these privileges whenever the best interests of the Nation demand.

Since June last the department has been conducting a careful investigation to determine the desirability and practicability of extending the Government ownership and control of means of communication, with a view to the acquisition by the Government of the telegraph and telephone facilities, to be operated as an adjunct to the postal service. The Postmaster General is now engaged in reviewing the data collected and later, if desired, will submit same to the appropriate committees of Congress for their consideration.

ADMISSION OF THIRD-CLASS MATTER TO THE PARCEL POST.

The third class of mail embraces, among other things, books and matter wholly in print, but not included in the second class, to which was originally accorded rates of postage lower than those prescribed for merchandise. The establishment of the parcel post has had the effect of negativing to some extent this preferential consideration, as the parcel-post rates are lower in many instances than the corresponding rate on third-class mail. The postage on a parcel containing merchandise weighing 4 pounds, when addressed to a patron residing on a rural route emanating from the office of mailing, is 7 cents, and when addressed to the first and second zones, 8 cents, while on a parcel containing books weighing 4 pounds, it is 32 cents. The parcel-post rates are graduated by pounds and zones, while the rate for third-class mail is 1 cent for each 2 ounces or fraction thereof, regardless of distance. If the proposed parcel-post rates were applied to the latter, there would be some instances in which the rate would be higher than at present. These are necessary to the proper equalization of rates on the basis of cost, as the present third-class rate for distant shipments does not cover the cost of the service Under the present flat rate of postage the near-by shipments of third-class mail are taxed to pay the cost of transportation and handling of the distant shipments.

The department has received many requests that the third and fourth classes of mail be consolidated. The exclusion of books from the benefits of the parcel post was a source of keen disappointment, and a large number of circulating libraries, schools, colleges, and publishers have asked that books be admitted to the parcel post, so that the high weight limit and the zone rates of postage might apply. Every reason that induced Congress to make a separate classification of books, packages of seeds, and other articles the educational or helpful character of which entitled them to preferential rates may be now advanced with greater force to admitting them to the fourth

class. It is believed, however, that it would work a hardship to apply to such matter up to 4 ounces the parcel-post rate of 1 cent an ounce, and from 4 to 8 ounces the pound rates of from 5 to 12 cents. It is therefore deemed advisable, in admitting third-class matter to parcel post, to retain the present rate on parcels weighing 8 ounces or less.

Any action toward consolidating the third and fourth classes of mail should be taken gradually, and for that reason the department proposes to first admit books to the parcel post. The consent of the Interstate Commerce Commission to change the classification of articles mailable under the act of August 24, 1912, so as to include books in the fourth class has been obtained, and an order making it effective March 16, 1914, has been issued. The effect of this change of classification will be carefully observed, and additional changes made only as it appears clear that they will promote the service to the public.

PRECANCELED POSTAGE STAMPS.

In connection with the tendency of modern business to eliminate waste and increase efficiency, the postal service is keeping constant watch on its operations with a view to giving the most economical administration consistent with the greatest possible efficiency. Along this line the use of precanceled postage stamps on mail of other than the first class has been found to effect a considerable saving in time and expense both to the Government and the mailer. The use of such stamps has therefore been extended and encouraged, their advantages being especially pointed out to senders of large quantities of mail, and the restrictions applicable to them have been greatly simplified. These stamps are canceled in bulk by printing on them between two black horizontal lines the name of the post office at which they are to be used.

The cancelation by hand of postage stamps affixed to mail is a slow process. A clerk working industriously for eight hours could cancel the stamps on not more than 5,000 packages. When it is borne in mind that at least 300,000,000 parcels were handled during the first six months of the operation of the parcel post service, the time, labor, and expense involved in canceling the stamps thereon become apparent.

The use of the precanceled stamp is of particular advantage in the case of parcels of fourth-class matter varying as to size, weight, and zone of delivery, relieving the service of the slow and expensive process of canceling by hand postage stamps affixed to such mail. This facilitates its handling and expedites its delivery and will accomplish a considerable saving to the postal service in the way of clerk hire, besides relieving the stress during the holiday period.

IMPROVEMENT OF CONDITIONS IN THE RAILWAY MAIL SERVICE.

The restoration of conditions of the Railway Mail Service enabling it to respond properly to ordinary fluctuations in the service and to adequately handle the large increase in business resulting from the inauguration and rapid development of the parcel-post system has proceeded with satisfactory results, although necessitating an immediate and unusual expenditure. During the brief period of four months at the close of the fiscal year a greater amount of railway post-office service was authorized and established, a larger number of railway postal clerks were appointed, and a much larger increase in the authorization of necessary railway post-office cars was made, than during the preceding eight months of the previous administration. These needed improvements have since been steadily carried forward, and although the demands of the business to be cared for are unprecedented for this season the service is meeting them effectively.

INTERCHANGEABLE PERSONNEL.

It is the aim of the present administration to remove, so far as possible by departmental action, the obstacles in the way of the most effective utilization of the entire force of postal employees, and to recommend to Congress the enactment of such legislation as may be found necessary to a full realization of an interchangeable personnel. Clerks in each post office should be so trained in uniform methods that their transfer to other post offices may be effected with the least possible detriment to the service. Clerks in post offices should also be readily transferable to the railway mail service, where the experience they have gained would shorten the time required for training them. Space in railway post office cars represents a large cost to the Government and it is not economical to recruit the force for those quarters entirely from untrained and inexperienced candidates. A plan is being formulated to facilitate the appointment to positions of railway postal clerks of post-office clerks who desire to enter the Railway Mail Service. Uniform examination requirements for entrance to the two branches of the service may be provided so as to allow the forces to be interchangeable. There is, however, an obstacle to the effective development of this plan. Under the existing law clerks in post offices can be transferred to the Railway Mail Service only at the minimum salary of $900 per annum in that service. With this limitation it is impossible to secure from post offices the best clerks for the Railway Mail Service. The law should be amended so as to permit such transfers at salaries not exceeding in any case the salaries received in the post-office service. A recommendation for suitable legislation to this effect will be found on page 50 of this report.

TRANSPORTATION OF PERIODICALS IN FAST FREIGHT TRAINS.

During the year the transportation in fast freight trains (mainly in carload lots) of certain second-class mail matter (periodicals) published less frequently than weekly, between large cities in the second and third contract sections, was continued, with a resultant saving in the cost for railroad transportation of $1,491,013.85. This policy has not been extended to embrace the territory in the first contract section because of the prohibition contained in the act of Congress of August 24, 1912.

This plan of transportation has proved satisfactory to a large majority of the publishers of the periodicals so carried. When such periodical does not contain matter in the nature of current news or with reference to which time is not of the essence in its distribution and delivery, a sufficient advance of delivery by the publisher to the postal authorities may be made to overcome the difference of time between the fast freight and the regular mail train movements. However, a few publishers of periodicals included in the fast freight transportation have represented to the department that their publications contain matter which is in the nature of news, and that therefore they are unable to make a sufficient advance delivery to the postal authorities, and that the slower movement in transportation results in loss and injury to them, as well as to their subscribers. They requested that they be given the privilege of the regular mail service. On account of the fact that adjustments of compensation on the routes over which the periodicals would be transported if restored to the regular mail trains are based on weights of mails carried, exclusive of those segregated for transportation in fast freight trains, it has not been considered practicable to make such restorations without reweighing the mails and making readjustments of compensation on the routes affected. The question of the authority of the department to make readjustments upon a weighing of mails so restored to regular mail trains has been submitted to the Comptroller of the Treasury and decided in the affirmative. Following this decision, careful consideration has been given to the representations of the various publishers requesting the restoration of their publications to the regular mail trains, and where the merits of the case warrant it such publications will be transferred from the fast freight to the regular mail trains and reweighings and adjustments made accordingly. This favorable and equitable solution of a vexing question will not only result in dealing justly with the publishers concerned, but will enable the department to continue without material objection the system which has resulted in such reasonable and commendable economies.

It is earnestly hoped that Congress will remove the prohibition against the extension of this system of handling second-class matter

and enable the department to apply it where found practicable in the other contract sections. A recommendation for legislation is included in this report on page 49.

COMPENSATION TO RAILROADS FOR CARRYING THE MAILS.

Compensation to railroads for carrying the mails is under the present laws adjusted upon the basis of average daily weights of mails carried. In addition to this certain rates of pay are allowed for full railway post-office cars 40 feet and more in length, fitted up and furnished for the distribution of mails en route. Reference has been made in previous annual reports to the inquiry conducted by the department under authority of law into the operating receipts and expenditures of railroad companies carrying the mails and to the submission to Congress of the results of such inquiry, together with recommendation for a change in the method of adjusting pay.

The whole subject has since been taken up by a joint committee of Congress authorized to make inquiry into the subject of postage on second-class mail matter and compensation for the transportation of mails. The department's officers in charge of transportation have, upon the request of the committee, appeared before it during the numerous hearings which have been held and have submitted such additional information as they possessed upon the general subject. The representatives of the railroad companies have also appeared before the committee. In the meantime the new conditions in the postal service, mainly those arising from the inauguration and the development of the parcel-post system, are being given careful consideration in connection with the general question, and before the commission is ready to report the final views of the department will be submitted to it.

The determination of what shall be the basis for ascertaining a fair rate of compensation for carrying the mails is not free from difficulties. From a careful consideration of the subject it becomes evident that the carriage of the mails by the railroad companies for the Government can not be considered as of the same character of service as that performed by them as common carriers for the general public. The railroads have received certain benefits from the States from which they derive their corporate existence, and their interstate commerce is subject to the regulation of the Federal Government. Some of them have received substantial aid from the Federal Government by grants of lands and otherwise. They are declared by law to be post roads. As mail carriers they are agencies of the Post Office Department and are performing a governmental function. The postal business is not carried on by the Government for profit but in furtherance of the constitutional

power to establish post offices and post roads under which it furnishes postal facilities to all of its citizens. The railroads, therefore, may not deal with the Government as they would with a shipper who uses their facilities as a common carrier for profit or for some special advantage. Furthermore, the general business which sustains a railroad is to a large extent dependent upon the mails and their certain and expeditious transportation, and the carriage of the mails by the railroad contributes to its prosperity to an extent and in a manner which does not obtain for any other class of its business. From these and other considerations, it follows that rates for carrying the mails on railroads should be less than those which might be fixed for commercial business.

When the data in hand and now being secured by the department are thoroughly considered and analyzed, the Postmaster General will lay before the appropriate committees of Congress the conclusions reached as to what will be just and adequate compensation for all services which the railroads are rendering or will be called upon to render the Government for mail transportation.

ADDITIONAL COMPENSATION FOR MAIL TRANSPORTATION ON ACCOUNT OF PARCEL POST.

In order to provide additional compensation to mail contractors for carrying parcel-post matter, Congress authorized the Postmaster General to make certain readjustments of pay to railroad companies and to screen wagon and star-route contractors.

On account of the increased weight of mail resulting from the enactment of the parcel-post law, the Postmaster General was authorized by the act of March 4, 1913, to add to the compensation for transportation on railroad routes on and after July 1, 1913, for the remainder of the contract terms, not exceeding 5 per cent thereof per annum, excepting upon routes weighed since January 1, 1913, and to be adjusted from July 1, 1913. Careful estimates have been made of the increase in the weight of mails carried on all railroad routes coming within the scope of the law. The routes affected include those in the second, third, and fourth contract sections and those located in the New England States in the first contract section. Additional compensation has been allowed, based upon the statutory rate earned by the estimated increased weight of mails, not exceeding, however, 5 per cent, the limit fixed by law. The increase in annual rate of compensation by the allowances made under this authority aggregates $1,682,360.19.

The Postmaster General was further authorized by the act of August 24, 1912, to readjust the compensation of star-route and screen-wagon contractors if it shall appear that as a result of the parcel-post system the weight of mails handled by them shall be

materially increased. Pursuant to this authority the weight of mails on all contract screen-wagon and star routes during the periods from October 1 to November 30, 1912, and from March 1 to April 30, 1913, and the additional expenses incurred by the contractors during the period from January 1 to June 30, 1913, as a direct result of the parcel-post system, were ascertained. Upon these data orders have been made readjusting the compensation where the facts warranted it. The increased compensation authorized to date aggregates for screen-wagon service $38,612.50 for the fiscal year 1913, and $66,881.52 for the fiscal year 1914, and for star-route service $141,290.80 for the fiscal year 1913, and $254,636.94 for the fiscal year 1914.

On August 15, 1913, the order increasing the weight limit of parcels to 20 pounds and reducing the rates in the first and second zones became effective. In order that a fair estimate may be made as to the increase in weight of such matter resulting from these changes, statistics as to parcels have been taken upon representative railway post office lines throughout the country, upon all screen-wagon routes, and in all post offices of the first class, 5 selected post offices of the second class, and 5 selected post offices of the third class in each State, and in 20 post offices of the fourth class in the larger States, and in 10 post offices of the fourth class in the smaller States. Upon this information consideration is being given as to what recommendations should be made for a further increase in compensation because of changes resulting from this order. Similar action will be taken with each further development of the service.

Criticism by some has been directed against the department for the inauguration of the parcel-post system with provisions of only 5 per cent increase in compensation to railroads where weighings have not occurred since January 1, 1913, and for the exercise by the Postmaster General of the power given him by statute to increase the possible benefits of the parcel-post act to the people in the absence of advance provisions by Congress to pay for the increased weights carried by the railroads.

With respect to the first it should be remembered that Congress provided for the inauguration of the system and, with such facts before it as were available, authorized the addition of not exceeding 5 per cent to the compensation from July 1, 1913, as above stated. It must be presumed that Congress intended this allowance to be full compensation for the additional weights carried until it should make other provision. With respect to the second the law authorizes the Postmaster General to make suitable changes as to classification, weight limit, postage, zones, and conditions of mailability, subject to the consent of the Interstate Commerce Commission, in order to promote the service to the public and to insure the receipt of revenue from such service adequate to pay the

cost thereof. It is believed that when the conditions arise upon which such acts are appropriate the Postmaster General should take the necessary steps as soon as practicable, leaving the question of action by Congress for consideration by that body. Otherwise the purpose of the act would be defeated by long delays and possible failures to secure action. Such changes, resulting in large increases in the service performed for the department by the railroad companies and other contractors, should and will be given the most careful consideration and be made the subject of suitable representation and recommendation to Congress for appropriate action where it is warranted.

TERMINAL RAILWAY POST OFFICES.

Under the present administration plans have been matured to establish at important commercial and railroad centers under the supervision of the Railway Mail Service an extended system of terminal railway post offices for handling parcel-post and ordinary mail. These are located in railroad stations, when practicable, or in buildings convenient thereto. A considerable number are now in operation and others will be established as soon as possible. Mails distributed in these terminals include mails made up in post offices for Railway Mail Service distribution, which otherwise would be held without distribution before the departure of the trains, and mails en route which may be held over without delay in transportation at important junction points where terminals are located, thus utilizing time in transit to the greatest extent possible, and advancing distribution. The terminals provide facilities for the distribution and proper packing of bulky and fragile parcel-post packages, facilitating expeditious carriage and safe handling. Furthermore, this system of handling the mails keeps out of postal cars a large amount of merchandise and printed matter that otherwise would cause congestion and seriously interfere with the distribution of letter mail and news matter. The distribution in these terminals is of a simple character, and can be performed by clerks with less preparation and study than is required for the more complicated distribution made in railway postal cars. At the same time it finally disposes of approximately 70 per cent of the mail that is handled in the terminals. This large proportion of the mail, when thus made up, is forwarded in storage or baggage cars on mail trains with equal expedition, but without the additional expense that would be involved if it were carried and distributed in the post-office cars.

When the present plans have been completed of enlarging some terminals already installed and of establishing the additional ones decided upon, they will effect an estimated saving of approximately $1,500,000, which would otherwise be necessary for railway post-office car pay.

OCEAN MAIL SERVICE.

At present contract service is in operation under the provisions of the ocean mail act of 1891 on five routes, namely, from New York to Puerto Cabello, Venezuela; New York to Maracaibo, Venezuela; New York to Vera Cruz, Mexico; New York to Southampton, England; and San Francisco to Sydney, Australia.

The total cost of this contract service for the fiscal year 1913 was $1,144,630.79, and the net excess cost of the service over what the cost would have been if the conveying steamers had not been under contract was $157,818.28. Great care is being taken to dispatch all mail by the contract steamers that can not reach destination materially sooner by being dispatched by other steamers, and it is confidently expected that the amount of excess cost on account of contract service, which is already small, will soon be eliminated.

None of the contracts in force will expire during the fiscal year ending June 30, 1914, or during the fiscal year ending June 30, 1915.

AERIAL MAIL SERVICE.

Since the first authorization of experimental aerial mail service in 1911 the department has given like permission in 54 instances. A considerable number of pieces of mail has been carried in this manner, but without expense to the department. In connection with the transportation service an item has been included in the 1915 estimates for $50,000 to provide for an experimental service. It is believed that there are sections of the country where, because of topographical conditions, this class of service might be advantageously employed in some cases. (See suggested legislation on page 50 of this report.)

POSTAL SAVINGS SYSTEM.

The Postal Savings System, from the time of its inauguration as a branch of the postal service until May 1, 1913, was conducted as an independent office under the immediate supervision of the Postmaster General. On this date the business of the system, together with the corps of employees, was transferred and assigned to the Bureau of the Third Assistant Postmaster General, in furtherance of the policy of the department to assign to one bureau, in so far as possible, all functions or duties of related character. A reorganization of working force and a revision of business methods immediately followed the assignment, with the result that important economies have been effected and the work of the service greatly facilitated.

On June 30 the Postal Savings System was in operation at 12,158 offices, of which 8,227 were of the presidential grade and 3,931 of the fourth class. Savings facilities have also been extended to 662

branches and stations, making a total of 12,820 depositories in operation on that date. Since June 30 the service has been extended to 210 presidential offices not theretofore designated as depositories, completing the installation of savings facilities at all presidential post offices, except those in the Hawaiian Islands and in Porto Rico, to which the service will soon be extended in accordance with arrangements that have already been perfected. It will be extended to other post offices and stations as rapidly as necessity for such action is shown.

The number of savings depositors on June 30 was 331,006 and the amount on deposit to their credit was $33,818,870. Postal savings bonds to the value of $3,506,000 have been issued to depositors, who, under a privilege accorded by the postal savings act, have surrendered their savings certificates for this purpose.

Banks to the number of 7,226 have qualified to receive postal savings funds, including 3,786 national banks, 2,405 State banks, 377 savings banks, 609 trust companies, and 49 organized private banks subject to State supervision.

The provisions of the postal savings act which limit the amount that may be accepted from a depositor to $100 in a calendar month and restricts his maximum balance to $500 have seriously impaired the intended utility of the service and should be removed. These precautionary limitations were placed on postal savings deposits because the service was entirely new and in a sense experimental. It has been conclusively shown that substantially all of the deposits represent the hoarded savings of wage earners who have implicit confidence in the Government but who will not patronize private savings institutions. Thus more than $33,000,000 has been called from hiding places and turned back through the medium of the banks into the commercial activities of the very localities from which they were drawn. The files of the department are full of reported incidents where much larger sums than may now be accepted have been rejected and thus been driven back into hiding and disuse.

A conservative estimate indicates that more money has been refused by the Postal Savings System than has been accepted. A still more serious effect than the loss to business of rejected savings, a large percentage of which has been sent abroad, is the confused thought and consequent lack of confidence which prevails among foreign-born people, who can not understand why the Government will safeguard a part of their savings and not all of them. This misunderstanding is generally prevalent among those who are most in need of the service.

The Postal Savings System should accept any amount tendered by a depositor, but interest should not be allowed on deposits standing to the credit of any one person in excess of $1,000. This restric-

tion would serve the double purpose of accommodating depositors who are seeking absolute safety regardless of what their savings may earn and at the same time discourage the transfer of interest-bearing accounts from private savings institutions to the Postal Savings System

It is recommended that the authorization of additional compensation to postmasters of the fourth class on account of postal savings business done by them be abolished, as the amount that may be allowed them under the statute is infinitesimal when compared with the expense of ascertaining and apportioning it.

It is also recommended that the statutory requirement that special or distinctive stamps be used on official mail matter relating to the Postal Savings System be repealed. It was originally thought that distinctive stamps would assist in determining one of the cost features of the new service. The method has been found impracticable and the expense of manufacturing and distributing the stamped paper is unwarranted. The Postal Savings System is now an established branch of the postal service and no valid reason appears to exist for treating its official correspondence differently from correspondence originating in other divisions of the department.

Suggested legislation covering the foregoing recommendations will be found on page 52 of this report.

SECOND-CLASS MATTER.

The mailings of newspapers and periodicals as second-class matter at the cent-a-pound rate and free in the county of publication, during the fiscal year 1913, were greater than during any previous year, and for the first time in the history of the postal service exceeded a billion pounds. Although second-class matter constituted approximately 62 per cent of the aggregate weight of the domestic revenue-producing mail, it produced only 4.98 per cent of the postage derived from such mail. The difference between the receipts from second-class matter and the expenditures chargeable thereto is not as disproportionate, yet it is so great as to deserve the most careful consideration with a view to fixing more equitable postage rates on the several classes of mail so that the revenue from each may be more nearly commensurate with its cost for handling and transportation. The commission created in 1911 under a joint resolution of Congress to investigate the subject found the cost of handling and transporting second-class matter, exclusive of certain expenditures regarding which exact information was not at hand, to be approximately 6 cents a pound, and recommended that the postage rate thereon be increased from 1 cent a pound to 2 cents a

pound, such charge being regarded as reasonable and a step in the direction of the equalization of the postage charges on the several classes of mail. The report of the commission, on February 22, 1912, was transmitted by the President to Congress with a recommendation for favorable action. Upon receipt of the commission's report Congress created a joint committee composed of members of the Senate and House of Representatives to give the subject further consideration, and the question of proper rates of postage on second-class matter is now before this committee. It is understood that the committee is making an inquiry into the subject and will report its findings with recommendation not later than March 4, 1914, as provided by law.

The findings of the commission which were transmitted to Congress by the President as above stated and which are now under consideration were reached after full and exhaustive hearings accorded not only the officials of the Post Office Department, but all publishers and others interested who desired to appear and present their views. There can be no doubt whatever as to the fairness and conservative nature of the finding. It is sincerely hoped that appropriate action will be taken at this session of Congress amending the existing laws and raising the rate in accordance with the recommendation of the commission. Until some such action shall be taken to readjust rates on second-class mail matter no serious consideration can be given to plans for revising and reducing rates on first-class mail matter.

MONEY-ORDER SERVICE.

The money-order service was established in 1865, and the year just closed has been the forty-ninth of its operation. At the close of the first year of its existence there were 419 money-order offices and 74,277 domestic money orders had been issued, aggregating $1,360,-122.52. At the close of the fiscal year ended June 30, 1913, there were 54,594 offices and 90,656,145 domestic money orders had been issued, aggregating $624,849,096.50. In addition thereto, the international branch of the service, which began operations in 1869 with the exchange of money orders with one foreign country, issued 4,606,863 international money orders in the fiscal year 1913, aggregating $102,668,288.08. The value of the money-order system as a postal facility, and the estimation in which it is held by the general public, is therefore fully demonstrated.

For a number of years requests have been received by the department that the money-order system be revised so as to permit orders being drawn on and paid at any money-order office, instead of a specified office as at present. In response to these requests a committee of departmental employees was recently appointed to inquire

into the feasibility of making such a change, and to submit such suggestions and recommendations in the premises as might seem proper. Some doubt having arisen as the right of the Postmaster General to change the requirement that money orders be drawn on a specified office, the Comptroller of the Treasury was requested to advise whether or not legislative action was necessary to so change the procedure. In a decision rendered August 25, 1913, the Comptroller decided that congressional sanction would be necessary. The committee, after an exhaustive investigation of the subject, reported unanimously that should Congress authorize the change, money orders may be issued payable at any money-order office, without danger of loss to the department or to patrons of the service. With the scope of the money order thus broadened, it is believed that its greater usefulness as a means for the transmission of funds will be apparent and its popularity with the public largely increased. A suggestion for proposed legislative enactment will be found on page 53 of this report.

EXTENSION OF THE INTERNATIONAL MONEY-ORDER SYSTEM.

Several of the more important South American countries have at present no convention with the United States for the exchange of postal money orders. In the construction of the Panama Canal the task of joining two oceans is now accomplished, and the largely increased and the more intimate commercial relations between the two continents which will unquestionably ensue will soon create an imperative demand for reciprocal money-order service. In the belief that these South American Republics will recognize the desirability of providing this means of transmitting money, letters have been addressed to the postal administrations of each country, suggesting the negotiation of appropriate conventions for this purpose

FRANKING PRIVILEGE.

Although there has been some agitation in recent years for the elimination of the franking privilege and the adoption of official stamps and envelopes in its stead, with a view to conserving the postal revenues by throwing the light of publicity on the free use of the mails by those to whom that privilege is accorded, it is not believed that there is such abuse of the franking privilege as would justify incurring the expense of manufacturing and distributing such envelopes and stamps. The Members of both the Senate and the House of Representatives display a uniform desire to confine the use of their franks to the transmission of matter relating strictly to their duties as representatives of their respective States and constituencies. The amount of franked matter carried in the mails

during the course of a year is very great, but it should be borne in mind that the constant demands made upon Members of Congress in respect to official matters require a vast amount of correspondence.

The widespread activities of the Federal Government result in the transmission of much free mail in "penalty" envelopes, but there is no reason to suppose that the volume of this necessary official correspondence would be reduced appreciably by any system of charging each department or other governmental establishment with its proportionate share of the expense now borne entirely by the postal service.

The expediency of the measure proposed is supported alone by the desirability of exact public accounting. It would be well if the postal service could receive due credit for the work it performs for Congress and for other branches of the Government, but this consideration is not one of vital importance and the difficulties in the way of successfully accounting for the free use of the mails makes it unprofitable to pursue the subject further. The free transportation of official mail is not the only service rendered by the department of which no account is kept. The investigation by post-office inspectors of the misuse of the mails and the protection consequently afforded the public from swindlers and other criminals, whose mailings are a social menace, represents a large cost to the department and a hundredfold saving to the public. These items must be regarded as enhancing the significance of the postal surplus, but it is impracticable to reduce them to actual figures.

RURAL MAIL SERVICE.

Special attention has been given to the work in connection with the extension of the Rural Delivery Service and steps taken to insure prompt consideration and investigation of cases involving petitions for the establishment of routes. In the middle of March, 1913, there were on hand 805 petitions that had not been passed on. Notwithstanding the fact that a large number of cases in addition to these were referred to the field for investigation, the number of petitions pending was reduced at the end of the fiscal year to 448. During the same period the number of cases pending involving changes in existing routes was reduced from 1,852 to 386. The number of rural routes in operation at the close of the fiscal year was 42,805.

The value of the rural mail service to the agricultural classes has been greatly enhanced by the establishment of the parcel post. The necessity for keeping pace with the great increase in the volume of this business originating on rural routes makes it imperative that some method be adopted to improve the public highways as an adjunct to the rural mail service.

NATIONAL AID IN THE CONSTRUCTION AND MAINTENANCE OF POST ROADS.

The postal appropriation act for the last fiscal year contained a provision setting aside $500,000 to be expended under the supervision of the Postmaster General and the Secretary of Agriculture in improving, in cooperation with the States and local authorities, the condition of the roads on which rural delivery is in operation. An attempt to allot this appropriation in equal amounts to the several States failed because very few of them were prepared to meet the requirements, mainly through lack of available funds. Subsequently, under date of April 21, 1913, a new plan was adopted, which included the selection of certain territory throughout the country where different soil, climatic and topographic conditions prevail, where the supply of material and labor differ, and where, through the agency of well-organized highway commissions, the States were in a position to participate as contemplated in the act. Actual work of construction is now progressing in various localities, so that information desired by Congress on the subject of Federal aid in the improvement of highways will soon be available.

Because of the favorable attitude of the American people toward national aid to State and local authorities in the construction and maintenance of post roads, it is especially gratifying that the department will soon have the benefit of the knowledge gained from the experiments now being conducted along this line to serve as a guide for recommendation for legislation on this subject.

The interest of the postal service in road building has been accentuated by the rapid development of the parcel post service, so that it is evident that the improvement of highways and the use of modern motor vehicles will in the near future become absolutely essential as a means of relief in the way of transportation and transmission of intelligence for all our people, and especially those in rural communities.

It is therefore suggested that a comprehensive system be adopted for Federal aid in the construction of and the cooperative cost of improvements to highways upon which postal facilities provide means of transportation for products of the farm to consumers in the cities. To accomplish the best results it is believed that the State is the only unit with which the Federal Government should cooperate, and that there should be participation on the part of the State in all appropriations for such purposes of at least double the amount contributed by the Federal Government.

The allotment of these joint funds should be made on such projects as have been approved by the authorized representatives of a regularly organized State highway commission and the representative

of the Post Office Department, and all expenditures for such improvements should be made under the direction of the Secretary of Agriculture.

The adoption of a unit for distribution of funds appropriated by the General Government for such purpose, based upon the area, mileage of highways within any State, and the rural population residing therein, would secure equal and exact justice to each State that avails itself of Federal assistance.

VILLAGE DELIVERY SERVICE.

In pursuance of a provision contained in the postal-service appropriation act for the fiscal year ended June 30, 1913, an experiment has been conducted in the free delivery of mail from post offices of the second and third classes located in communities that are not now entitled by law to city delivery service. At the close of the fiscal year the service had been established at 18 post offices of the second and 83 of the third class. A total of 126 carriers were employed for the purpose and the average annual compensation of each was $625.

The results attained during the year are believed not to warrant the continuance or extension of village delivery. There is no such need or demand for free delivery of mail in small towns and villages as there is in cities and rural districts, and its establishment does not occasion any appreciable increase in the use of the mails. An economical administration of such a service would require the limiting of delivery in nearly every instance to one a day and the employment of carriers at salaries lower than those paid to city and rural carriers. Such service is regarded as inferior by the patrons, who in such communities live near the post office and are in the habit of calling two or three times a day for their mail. The low salaries of the carriers, moreover, would not conduce to efficient service.

As rural routes emanate from practically all of the places where this village delivery service would be desired, the carriers should be used to make such deliveries as may be desirable and feasible to the residents of the villages. The compensation of rural carriers, however, at this time is based on the length of their routes, and to make them available for the service indicated their salaries should be based upon an eight-hour day. With this change these carriers could be used not only to supplement the general delivery service as indicated, but in many instances in the delivery of parcel-post matter as well, thus obviating the necessity for additional horse hire for the delivery of the larger packages. The compensation of rural carriers should therefore be changed from a mileage to an eight-hour basis, and these carriers should be permitted to deliver mail regardless of the distance from the post office or the corporate limits of the city or town.

TREATMENT OF UNDELIVERABLE MAIL MATTER.

The need for improvement in the handling of undeliverable mail matter received attention at the outset of the administration and steps were early taken looking to a complete reorganization of that branch of the service. Substantial economies of personnel and supervision have been effected, and at the same time the division at Washington has been put on an effective working basis. The plan was adopted on August 15 of having assembled at post offices where division headquarters of the Railway Mail Service are located all undeliverable third and fourth class matter that formerly was sent to Washington. This matter is thus disposed of more expeditiously and the cost of transportation is largely eliminated. At the same time the careful scrutiny of first-class mail and the return to owners of money and valuables contained therein is facilitated by relieving the trained force employed by the department of the necessity of handling bulky packages of printed matter and miscellaneous merchandise.

INSPECTION SERVICE.

The important work of the inspection service has been satisfactorily conducted. Readjustments of personnel and other changes have been made with a view to more effective organization and the highest degree of cooperation between the departmental and field services. The amount of work devolving on the force of inspectors has been greatly augmented by the establishment of a domestic parcel post, the rapid extension of the postal savings system, and the duty imposed on inspectors of establishing registers of eligibles for certain fourth-class postmasterships.

USE OF THE MAILS FOR FRAUDULENT PURPOSES.

The investigation of cases involving the use of the mails for fraudulent purposes continues to be an important part of the inspectors' work. These investigations and the consequent prosecutions and convictions constitute an effective means of protecting the public from all kinds of mail-order swindlers. During the fiscal year 2,879 such schemes were referred for investigation, 510 persons arrested, and 304 convicted. The operations of those arrested and convicted are estimated to have cost the public nearly $54,000,000. The vigilance of the inspectors in detecting these offenses and the large percentage of convictions secured have undoubtedly had the salutary effect of deterring others from engaging in criminal enterprises through the use of the mails.

In addition to securing such convictions, the department has another efficacious means for protecting the public against those

who use the mails to defraud. By the issuance of a "fraud order" the use of the mails, especially for the receipt of remittances, may be denied.

FRAUD ORDERS.

The issuance of fraud orders, under sections 3929 and 4041, Revised Statutes, as amended by the acts of September 19, 1890, and March 2, 1895, against swindlers using the mails to conduct schemes to defraud the public was practically discontinued, and little effort has been made to enforce these sections during the past several years, the published reports of the department showing that the Government relied almost entirely upon the enforcement of section 5480 of the Revised Statutes (now sec. 215 of the Criminal Code), which provides for the indictment and punishment of persons who use the mails in conducting schemes to defraud.

At the outset of the present administration the attention of the department was called to the fact that reliance upon criminal prosecutions to root out the various schemes to defraud the public through the mails had been ineffective, that criminal proceedings are necessarily slow, and by means of appeals and other methods, the execution of sentences had been deferred for long periods, during which the concerns and individuals had continued to reap a harvest from their fraudulent enterprises. In some instances, the penalty of the law being merely a fine, there was nothing to prevent the parties from continuing the conduct of their schemes except fear of subsequent fines. These they could easily afford to pay in view of the large revenue derived from the business. Instances were brought to the attention of the department where even after a term of imprisonment the fraudulent scheme was resumed by the offender upon his release, and in other instances the operation of the fraudulent scheme was continued without interruption during the criminal proceedings, conviction, and imprisonment, during all of which time the public had been left at the mercy of these swindlers, in ignorance of the prosecution and in reliance upon the integrity of any concern which the Government permitted the use of the mails; the very use of the mails itself being advertised by some of these fraudulent concerns as an evidence of the fact that they were necessarily doing a legitimate business or the Government would not permit them the use of the mails.

After careful consideration of this situation, and in the belief that sections 3929 and 4041 of the Revised Statutes as amended should be vigorously enforced independently of the criminal statute (sec. 215 of the Criminal Code), directions were given to that effect soon after the induction into office of the present administration. Since that

time with the cooperation of the Division of Post Office Inspectors and the Assistant Attorney General, a large number of citations have been issued to persons and concerns alleged to be doing fraudulent business through the mails, and hearings in very important cases are now being held under such procedure as guarantees a full and fair presentation and consideration of the evidence and argument of the respondents in each case before determining whether or not fraud orders should be issued. Some idea may be conveyed of the magnitude of this undertaking when it is considered that in the enforcement of the criminal statute (sec. 215 of the Criminal Code), during the year ended June 30, 1912, more than 4,000 cases involving schemes to defraud were investigated by post-office inspectors; that in the two years preceding that date over 1,000 persons had been arrested for such swindling through the mails, and that the estimated losses to the public through the fraudulent operations represented by these arrests amounted to over $129,000,000.

FRAUDULENT DEVICES.

The advertisement and sale through the mails of "unfair" or cheating gambling appliances or devices, such as marked playing cards, loaded dice, etc., is the subject of much complaint from the public, and appeals are frequently made to this department for the exclusion of such matter from the mails. These advertisements and the literature accompanying the devices clearly show that they are intended for use in defrauding unsuspecting persons engaged in playing games of chance for money or other things of value by giving the possessors of such devices an unfair advantage over others. Efforts to prosecute persons engaged in the sale of such commodities through the mails have proven unsuccessful, the court having held in a late criminal case that the present fraud law does not embrace a transaction of this kind. Under this decision such devices are mailable, and a fraud order can not properly be issued against persons offering them for sale through the mails. In view of the fact that the usual and obvious use to which these devices are put is to defraud unsuspecting persons, as much so as though counterfeit money were passed upon them, it is believed that for the protection of the public the law should be so amended as to exclude from the mails the devices themselves and all matter in any way relating to their sale. It is therefore recommended that sections 3929 and 4041 of the Revised Statutes, as amended by the act of March 2, 1895 (28 Stats., 963), be amended so as to include any person or concern engaged in advertising or selling such devices, and that section 215 of the Criminal Code of the United States be also amended so as to include such persons and concerns.

LOTTERY PARAPHERNALIA.

Of late years the department has been continually receiving complaints against the use of the mails for advertising and selling "raffle cards," "punch boards," slot machines, and similar contrivances manifestly designed for lottery purposes. These devices are merely the paraphernalia for operating lotteries, but such schemes do not become lotteries, according to the Opinions of the Attorneys General, until they are actually set up and put in operation, and under the existing lottery statutes the department is unable to exclude from the mails the cards or schemes themselves or matter relating to them before they are actually set up by the promoter to conduct a lottery.

It is recommended that section 213 of the Criminal Code of the United States be amended so as to render unmailable these cards and devices and matter relating to them, and that sections 3929 and 4041 of the Revised Statutes, as amended by the act of March 2, 1895, be amended so as to authorize the issuance of fraud orders against persons or concerns engaged in the sale of such lottery paraphernalia through the mails.

Suggested legislation covering fraudulent devices and lottery paraphernalia will be found on page 54 of this report.

DETERMINING THE LEGAL ACCEPTABILITY OF POSTAL-SAVINGS SECURITIES.

Within recent months the board of trustees of the Postal Savings System, by its regulations, has assigned to the office of the Assistant Attorney General for the Post Office Department the duty of determining whether State and municipal bonds, tendered as security for postal-savings funds by banks which have qualified as depositories thereof, have been issued in full compliance with constitutional and statutory provisions, and whether such securities are "public bonds or other securities supported by the taxing power," as prescribed by the postal-savings act of June 25, 1910. By reason of the great variety of the bonds tendered and the complexity of many of the authorizing statutes, the legal examination is considered of vast importance.

CLAIMS OF POSTMASTERS FOR REIMBURSEMENT FOR LOSSES SUSTAINED.

The Postmaster General is authorized by the acts of Congress approved May 9, 1888, and June 11, 1896, to reimburse postmasters in sums not exceeding $10,000 for losses of Government funds and stamp supplies resulting from "fire, burglary, or other unavoidable casualty," and for losses of such funds in transit to their designated

depositaries. By the Postal Regulations the Assistant Attorney General is required to make examination of this class of cases and advise the Postmaster General as to their allowance. During the fiscal year just closed 1,401 claims of this character were received, which was six more than in any previous year. The number of claims allowed was 1,557, amounting to $442,604.12, which was 499 claims more than and over twice the amount allowed in any previous year. This large increase in amount was due in part to the action of Congress in directing the Postmaster General to allow credits of the total amount of $132,143.72 in the accounts of the postmaster at Bangor, Me., to reimburse him for losses sustained on April 1, 1911, when the post office and its contents were practically destroyed by fire which swept over that city. This is the largest single claim of this character ever allowed by the Government through this department.

REIMBURSEMENT OF POSTMASTERS FOR POSTAL SAVINGS LOSSES, KEY-DEPOSIT FUNDS, AND OTHER LOSSES.

The acts referred to above authorizing the Postmaster General to adjust certain claims of postmasters for losses of money-order funds, postal funds, postage stamps, stamped envelopes, newspaper wrappers, and postal cards resulting from "fire, burglary, or other unavoidable casualty" are manifestly inequitable for the reason that there is no authority to grant relief to a postmaster for the unavoidable loss of certain kinds of funds and accountable property and the department must withhold relief respecting kindred classes of Government property, even when the loss of the latter may have been occasioned by the same cause.

It is recommended that this law be amended so as to cover other funds and stamped paper for which no provision is now made by law, such as postal-savings funds, postal-savings cards, postal-savings stamps, and postal-savings certificates belonging to the United States in the hands of postmasters, and for the loss of key-deposit funds, funds deposited to cover postage on mailings, and funds received as deposits to cover orders for stamped envelopes in the hands of postmasters.

Suggested legislation covering the foregoing recommendations will be found on page 52 of this report.

SUPPLIES FOR THE POSTAL SERVICE.

The purchase of supplies has been largely augmented by the establishment of the parcel post and postal savings system, and in future the work of the department will be still further increased by the

decision of the Comptroller of the Treasury exempting the postal service from the operations of the law creating the General Supply Committee. Notwithstanding the general rise in prices, the department has been enabled to effect a considerable saving in buying of equipment, amounting to more than $50,000 annually, on the principal items, which saving will be still further increased on the purchase of postal-card stock and other lines. It is believed that a considerable economy can be shown by the purchase of all supplies, including canceling machines, vehicles, and other equipment now rented under contract. At the same time the equipment has been improved, notably the appearance and utility of letter boxes. For the first time in the history of the department automobiles have been purchased and the reports relative thereto would seem to indicate that it would prove cheaper in the long run for the department to own its vehicle service. A more general inspection of supplies is being made, the necessity for such inspection having been brought forcibly to the attention of the department by an investigation of adding machines previously bought for the service. The revision of the regulations of the department to harmonize more fully with the spirit of the act creating the purchasing agent's office has enabled this office to increase its usefulness to the department.

GUARANTY FUND IN LIEU OF BONDS.

Under existing legislation the officers and employees of the postal service accountable for funds and property are required to furnish surety bonds in amounts prescribed by the department. A discussion of this subject in the report of the First Assistant Postmaster General shows that this method of insuring against loss does not afford adequate protection to the Government and imposes an unnecessary burden on employees. Consideration of the obvious advantages of a guaranty fund as a substitute for surety bonds has led the department to investigate the feasibility of adopting such a plan. As a result of this inquiry and consequent careful consideration, the enactment of legislation along the lines of that suggested on page 49 of this report is recommended in order that the Postmaster General may dispense with the requirement of surety bonds, and in lieu thereof assess against the officers and employees now required to furnish such bonds amounts sufficient in the aggregate to reimburse the Government for all losses due to misconduct or negligence. The plan proposed is believed to afford the maximum protection to the Government at the minimum cost to the employees, and has the further advantage of greatly reducing the cost of administration.

SITES FOR BUILDINGS.

It is believed that greater economy and efficiency in the postal service can be attained if sites for Federal buildings used exclusively for post-office purposes be selected by representatives of this department and in cases where the Federal building is to be erected for the joint use of the Post Office Department and other Government services the selection of the site to be made by representatives of the departments interested. This department has a corps of experienced inspectors who are experts in postal affairs and thoroughly familiar with the requirements of post offices as they negotiate leases for quarters for post-office purposes, and it is believed that their services could be utilized advantageously both in the selection of sites and in the interior arrangement and equipment of post offices, which should be made by the department. As in buildings occupied exclusively for post-office purposes, which is the case in the majority of public buildings, this department is vitally interested in the maintenance of the building, it would appear sound business policy to transfer the maintenance of the buildings from the Treasury Department to the Post Office Department. The preparation of plans for and the construction of these buildings should be under the jurisdiction of the Supervising Architect's office of the Treasury Department, subject to the approval of the Postmaster General. In cases where buildings have not been conveniently located it has been necessary to maintain stations in the business section of the city with the same facilities as at the main office, which not only increases the cost of the service but delays the dispatch and delivery of mail. A recommendation for legislation on this subject will be found on page 48 of this report.

APPOINTMENT OF POSTMASTERS.

Early announcement was made that all presidential postmasters appointed by the preceding administration would be permitted to serve out their terms and that no removals except for improper conduct or incapacity would be made. This policy has been scrupulously adhered to and has had the effect of preventing even a slight disturbance of the postal organization. The appointment of successors to those postmasters whose commissions have expired from time to time has proceeded in an orderly manner, and the department has not been embarrassed by the occurrence of any number of vacancies too great to be filled promptly with competent and approved applicants.

A concurrent announcement declared that the department would require every postmaster to give to the conduct of his office his individual attention for eight hours daily. This requirement has been rigidly enforced. No person is permitted to enjoy the emoluments of a postmastership on any consideration other than the personal performance of full and satisfactory official service.

The most careful examination has been made of the fitness of all applicants for postmasterships and appointments have not been made until the department was convinced of the integrity of the appointees selected and of their capacity for efficient service.

It is hoped that by thus maintaining a high standard of efficiency for postmasters and keeping paramount the interest of the postal service in making appointments that the way will be made clear for the eventual classification of all presidential postmasters.

All fourth-class postmasterships, except those in Alaska, Guam, Hawaii, Porto Rico, and Samoa, are now classified civil-service positions, but the classified status accorded to the present incumbents by an Executive order promulgated on October 15, 1912, by President Taft has been withdrawn by the Executive order of May 7, 1913, and these positions will be filled as the result of competitive examinations conducted by the Civil Service Commission. In each case the names of the three highest eligibles will be certified to the Postmaster General, who will select for appointment the one in his judgment best qualified to perform efficient service.

The Post Office system is essentially a business institution. It touches every home, comes in contact with every commercial institution and with those engaged in every line of industrial enterprise throughout the country, and in the nature of things it is highly important that only the most efficient employees should be in its service. For this reason the merit system should be adhered to in the Post Office Department above all others in order to secure the very highest standard of efficiency in the conduct of its affairs.

FINANCIAL SUMMARY.

Following is a statement of the audited revenues and expenditures on account of the postal service for the last fiscal year in comparison with the year preceding:

Comparison of revenues and expenditures for the fiscal year ended June 30, 1913, with those of the preceding year.

Items.	Fiscal year.	
	1912	1913
REVENUES.		
Ordinary postal revenues	$241,422,336.56	$261,037,393.92
Revenues from money-order business	5,321,679.02	5,582,131.73
Total revenues from all sources	246,744,015.58	266,619,525.65
EXPENDITURES.		
Expenditures on account of the current year	240,204,695.21	253,678,106.18
Expenditures on account of previous years	8,320,754.87	8,389,435.15
Total expenditures during year	248,525,450.08	262,067,541.33
Total revenues during the year	246,744,015.58	266,619,525.65
Excess of expenditures over revenues	1,781,434.20	
Excess of revenues over expenditures		4,551,984.32
Amount of losses by fire, burglary, bad debts, etc	4,088.90	41,333.41
Deficit in the postal revenues for the fiscal year ended June 30, 1912	1,785,523.10	
Surplus in the postal revenues for the fiscal year ended June 30, 1913		4,510,650.91

REVENUES IN DETAIL.

Postal revenues:		
Sales of stamps, stamped envelopes, newspaper wrappers, and postal cards	$230,749,038.55	
Second-class postage (pound rate) paid in money	9,975,348.92	
Third and fourth class postage paid in money	6,044,760.25	
Receipts from box rents	4,780,762.77	
Letter postage paid in money (made up principally of balances due from foreign administrations)	207,309.65	
Miscellaneous receipts	155,380.31	
Fines and penalties	93,650.46	
Receipts from unclaimed letters	31,143.01	
Total postal revenues		261,037,393.92
Money-order revenues:		
Revenues from domestic and international money-order business	5,188,740.97	
Revenues from invalid money orders	393,390.76	
Total revenues from all sources		266,619,525.65

EXPENDITURES IN DETAIL.

The audited expenditures of the postal service during the fiscal year were as follows:

Items.	On account of the fiscal year 1913.	On account of previous fiscal years.	Total
Transportation of mails on railroads	$43,343,950.31	$4,049,316.08	$47,393,266.39
Compensation to assistant postmasters and clerks in post offices	45,772,934.10	12,892.24	45,785,826.34
Rural delivery	45,566,695.23	96,376.39	45,663,071.62
City delivery	36,630,493.26	19,673.31	36,650,166.57
Compensation to postmasters	29,130,525.74	[1] 3,863.27	29,126,662.47
Railway Mail Service	22,708,011.95	217,602.16	22,925,614.11
Transportation of mails on star routes	6,205,543.92	645,732.40	6,851,276.32
Railway post-office car service	3,579,198.71	986,922.56	4,566,212.27
Rent, light, and fuel	4,397,976.41	23,159.59	4,421,136.00
Transportation of foreign mails	2,693,260.87	863,900.05	3,557,160.92
Transportation of mails—wagon service	1,580,125.01	140,891.89	1,721,016.90
Special delivery service	1,675,491.72	191.95	1,675,683.67
Mail messenger service	1,504,373.35	142,828.91	1,647,202.26
Manufacture of stamped envelopes	1,324,278.45	93,247.26	1,417,525.71
Post-office inspectors	1,097,449.69	92,870.78	1,190,320.47
Transportation of mails—pneumatic tube service	872,404.74	78,361.13	950,765.87
Transportation of mails on steamboats	709,815.00	126,150.06	835,965.06
Transportation of mails—electric and cable cars	634,612.18	59,250.07	693,862.25
Balances due foreign countries	467,285.74	223,476.64	690,762.38
Manufacture of postage stamps	650,945.21	36,435.81	687,381.02
Freight and expressage on supplies	313,483.56	130,286.68	443,770.24
Payment of money orders more than 1 year old	391,892.22	.....	391,892.22
Miscellaneous items at first and second class post offices	314,514.53	2,682.46	317,196.99
Canceling machines	294,965.07	12,068.50	307,033.57
Mail bags, etc	264,464.43	18,755.00	283,219.43
Manufacture of postal cards	243,088.96	28,837.44	271,926.40
Mail transportation in Alaska—star	178,798.93	52,484.23	231,283.16
Wrapping twine	194,980.53	12,210.56	207,191.09
Supplies, money-order service	116,471.32	16,072.49	132,543.81
Stationery	97,223.84	7,955.16	105,179.00
Laborers, mail-bag repair shops	97,478.08	89.03	97,567.11
Shipment of supplies	68,078.34	25,480.67	93,559.01
Parcel post	87,104.82	.....	87,104.82
Supplies, City Delivery Service	57,643.39	24,768.70	82,412.09
Facing slips, etc	62,221.19	13,580.52	75,801.71
Official and registry envelopes	65,069.62	5,981.89	71,051.51
Office appliances	40,398.36	22,793.08	63,191.44
Mechanical and labor-saving devices	39,571.72	6,377.60	45,949.32
Postmarking, rating, and money-order stamps	33,538.60	9,884.15	43,422.75
Indemnities, domestic registered mail	14,718.46	27,620.42	42,338.88
Supplies, Rural Delivery Service	22,307.39	17,034.19	39,341.58
Laborers, mail-lock repair shops	34,607.37	.....	34,607.37
Buildings for use of Post Office Department	26,200.00	8,200.00	34,400.00
Distribution of stamped and official envelopes	20,904.50	45.00	20,949.50
Expenditures under 19 smaller items of appropriation (less than $20,000 each)	53,009.36	40,811.37	93,820.73
Total expenditures during the fiscal year	253,678,106.18	8,389,135.15	262,067,541.33

[1] Repayments.

GROWTH OF THE POSTAL SERVICE.

Receipts and expenditures for certain years from 1800 to 1913.

Items.	1800	1810	1820	1830
Receipts	$280,804	$551,684	$1,111,927	$1,850,583
Expenditures	213,994	495,969	1,160,926	1,932,708
Excess of receipts	66,810	55,715		
Excess of expenditures			48,999	82,125

Items.	1840	1850	1860	1870
Receipts	$4,543,522	$5,499,984	$8,518,067	$19,772,221
Expenditures	4,718,236	5,212,953	19,170,610	23,998,837
Excess of receipts		287,031		
Excess of expenditures	174,714		10,652,543	4,226,616

Items.	1880	1890	1900	1903
Receipts	$33,315,479	$60,882,098	$102,354,579	$134,224,443
Expenditures	36,542,804	66,259,548	107,740,267	138,784,487
Excess of expenditures	3,227,325	5,377,450	5,385,688	4,560,044

Items.	1904	1905	1906	1907
Receipts	$143,582,624	$152,826,585	$167,932,782	$183,585,005
Expenditures	152,362,116	167,399,169	178,449,778	190,238,288
Excess of expenditures	8,779,492	14,572,584	10,516,996	6,653,283

Items.	1908	1909	1910
Receipts	$191,478,663	$203,562,383	$224,128,657
Expenditures	208,351,886	221,004,102	229,977,224
Excess of expenditures	16,873,223	17,441,719	5,848,567
Excess of receipts			

Items.	1911	1912	1913
Receipts	$237,879,823	$246,744,015	$266,619,525
Expenditures	237,648,926	248,525,450	262,067,541
Excess of expenditures		1,781,435	
Excess of receipts	230,897		4,551,984

Annual expenditures, by items, for the years 1904 to 1913, inclusive.

Items.	1904	1905	1906
Service in post offices:			
Salaries of postmasters	$22,273,415.63	$22,743,521.43	$23,548,988.33
Salaries of clerks, etc	21,043,973.86	23,125,718.92	24,700,645.34
City Delivery Service	20,585,570.31	20,923,392.35	22,095,211.02
All other expenditures	6,135,161.60	7,152,286.82	7,501,831.70
Total	70,038,121.40	73,944,919.52	77,846,676.39
Railway Mail Service	12,106,130.09	13,289,368.41	14,182,087.57
Rural Delivery Service	12,681,876.90	20,824,269.44	24,773,613.58
Transportation of domestic mail:			
By railroads	43,971,847.50	45,040,563.62	46,953,438.60
By other means of transportation	10,697,624.54	11,302,795.22	11,449,199.43
Total	54,669,472.04	56,343,358.84	58,402,638.03
Transportation of foreign mail	2,708,479.52	2,832,432.11	3,052,890.46
Payment on account of invalid money orders	158,036.75	164,820.91	191,872.86

Items.	1907	1908	1909
Service in post offices:			
Salaries of postmasters	$24,580,667.25	$25,602,973.86	$26,571,911.15
Salaries of clerks, etc	26,647,397.21	30,920,449.68	34,876,492.71
City Delivery Service	23,356,941.90	26,450,138.33	29,869,783.03
All other expenditures	8,788,126.13	9,649,691.38	10,061,092.05
Total	83,373,132.49	92,623,253.25	101,379,278.94
Railway Mail Service	15,178,374.82	17,390,532.15	18,356,800.13
Rural Delivery Service	26,666,889.22	34,455,269.59	35,586,779.50
Transportation of domestic mail:			
By railroads	49,758,071.01	48,458,255.34	49,869,374.52
By other means of transportation	12,002,580.70	11,962,539.41	12,382,475.27
Total	61,760,651.71	60,420,794.75	62,251,849.79
Transportation of foreign mail	3,031,038.24	3,034,025.44	2,943,849.32
Payment on account of invalid money orders	228,201.86	378,010.97	485,545.21

Items.	1910	1911	1912	1913
Services in post offices:				
Salaries of postmasters	$27,514,362.80	$28,284,964.11	$28,647,726.32	$29,126,662.47
Salaries of clerks, etc	38,045,456.62	40,364,930.39	42,484,457.37	45,785,826.34
City Delivery Service	31,805,485.28	33,165,067.58	34,266,926.35	36,732,578.66
All other expenditures	10,405,405.69	11,083,406.74	11,118,292.23	11,809,403.32
Total	107,770,710.39	112,898,368.82	116,517,402.27	123,454,470.79
Railway Mail Service	19,389,414.44	20,106,909.40	20,711,675.12	22,925,614.11
Rural Delivery Service	37,073,732.64	37,145,756.65	41,889,522.80	45,702,413.20
Transportation of domestic mail:				
By railroads	49,405,311.27	50,583,122.96	51,691,301.21	51,959,387.66
By other means of transportation	12,534,500.99	13,175,365.83	13,288,790.46	13,375,142.06
Total	61,939,812.26	63,758,488.79	64,980,091.67	65,334,529.72
Transportation of foreign mail	3,203,821.23	3,315,349.28	3,917,370.94	4,258,621.29
Payment on account of invalid money orders	599,733.54	424,053.74	509,387.28	391,892.22

RECOMMENDATIONS FOR LEGISLATION.

By way of suggestion the following tentative drafts of legislation embodying certain recommendations of the department are submitted:

READJUSTMENT OF POSTMASTERS' SALARIES.

To allow the department sufficient time in which to readjust the salaries of presidential postmasters, amend the act of March 3, 1883, so—

That, after June thirtieth, nineteen hundred and fourteen, the compensation of postmasters at post offices of the first, second, and third classes shall be annual salaries, graded in even hundreds of dollars, and payable in quarterly installments, and shall be ascertained and fixed by the Postmaster General on the basis of the gross receipts of their respective offices for the calendar year, to take effect at the beginning of the ensuing fiscal year, at the rates now prescribed by law. (See Report of First Assistant Postmaster General.)

COMPENSATORY TIME FOR SUNDAY SERVICE.

To enable the department to grant compensatory time for Sunday work at such times as the employees can be most conveniently excused from duty, amend the act of August 24, 1912 (37 Stat. L., 543), as follows:

That after June thirtieth, nineteen hundred and fourteen, should the needs of the service require the employment on Sunday of letter carriers in the City Delivery Service and clerks in first and second class post offices, the employees who are required and ordered to perform Sunday work shall be allowed compensatory time for such service at such times as they can be most conveniently excused from duty. (See Report of First Assistant Postmaster General.)

POST OFFICES IN FEDERAL BUILDINGS.

In order that the department may have jurisdiction over the selection of the sites for and the equipping and maintaining of Federal buildings used for post-office purposes, the following is recommended:

That hereafter all sites for Federal buildings to be used exclusively for post-office purposes shall be selected by the Postmaster General, and the equipping and maintenance of such buildings shall be under his direction and control; and all sites for Federal buildings to be used in part for post-office purposes shall be selected jointly by the Postmaster General and the Secretary of the Treasury, who shall be jointly charged with the direction and control of the equipping and maintenance of such buildings.

BRANCH POST OFFICES AND POSTAL STATIONS.

In order that the present legal restrictions as to the establishment of stations and branch post offices may be removed and the department given reasonable latitude in this matter, the following is suggested:

That hereafter the Postmaster General may establish, under such rules and regulations as he may prescribe, one or more branch offices, nonaccounting offices, or stations of any post office for the transaction of such postal business as may be required for the convenience of the public. (See Report of First Assistant Postmaster General.)

COMPENSATION TO INJURED POSTAL EMPLOYEES.

To extend to all postal employees injured or killed in the line of duty the same privileges and benefits now provided by law for railway postal clerks, post-office inspectors, and sea-post clerks:

That hereafter any officer or employee of the postal service who shall be disabled by accidental injury not due to his own negligence while performing his official duties may be granted leave of absence with full pay during the period of disability but not exceeding one year, then at the rate of 50 per centum of the annual salary of such officer or employee for the period of disability exceeding one year but not exceeding 12 months additional; and the Postmaster General may pay the sum of $2,000, which shall be exempt from payment of debts of the deceased, to the legal representatives of any officer or employee of the postal service who shall be killed while on duty or who, being injured while on duty, shall die within one year thereafter as the result of such injury. All laws or parts of laws in conflict herewith are hereby repealed. (See Reports of First and Fourth Assistant Postmasters General.)

GUARANTY FUND IN LIEU OF BONDS.

To dispense with the surety bonds now required of officers and employees accountable for funds or property and to substitute therefor a guaranty fund established and maintained by assessments prescribed by the Postmaster General:

The Postmaster General is hereby authorized to prescribe regulations for the establishment and maintenance of a guaranty fund, to be derived from assessments levied against and collected from officers and employees of the postal service accountable for funds or property, with which to make good losses resulting from the failure of any officer or employee of the postal service to properly discharge his official duties, and for the indemnification of the Government and any person or persons sustaining such loss or losses by payments out of such fund; but nothing herein shall be construed as binding the Government or the Postmaster General to make any such payment or reimbursement. (See also Report of First Assistant Postmaster General.)

EXTENSION OF THE SYSTEM OF TRANSPORTING PERIODICALS IN FAST FREIGHT TRAINS.

To enable the extension of the system of and to increase the economies effected by the transportation of second-class mail matter in fast freight trains where practicable:

So much of section 1 of the "Act making appropriations for the service of the Post Office Department for the fiscal year ending June thirtieth, nineteen hundred and thirteen, and for other purposes," approved August 24, 1912, which provides that the Post Office Department shall not extend or enlarge its present policy of sending second-class matter by freight trains is hereby repealed.

SCREEN-WAGON, COLLECTION, AND DELIVERY SERVICE IN CITIES.

To secure authority for making available sufficient funds to enable the Postmaster General to purchase and operate automobiles or other vehicles in cities to perform all the transportation, collection, and delivery service:

That the Postmaster General is hereby authorized, in his discretion, to use such amount of the appropriation for regulation, screen or other wagon service as may be

necessary for the purchase and maintenance of wagons or automobiles for and the operation of a combined screen-wagon and city collection and delivery service. (See the Report of Second Assistant Postmaster General.)

EXPERIMENTAL AERIAL MAIL SERVICE.

To enable the Postmaster General to establish and maintain an experimental aerial mail service by aeroplanes or other devices:

That the Postmaster General, may in his discretion, contract for an experimental aerial mail service by aeroplanes or other devices without advertisement therefor.

TRANSPORTATION OF MAIL BAGS IN MAIL TRAINS AT RAILROAD MAIL RATES.

To amend existing law so as to extend the period during which the department may ship mail bags in mail trains at railroad mail rates in emergencies:

And the Postmaster General in cases of emergency, between October first and April first of any year, may hereafter return to the mails empty mail bags theretofore withdrawn therefrom as required by law, and for such times may pay for their railroad transportation out of the appropriation for inland transportation by railroad routes at not exceeding the rate per pound per mile as shown by the last adjustment for mail service on the route over which they may be carried, and pay for necessary cartage out of the appropriation for freight or expressage. (See Report of Second Assistant Postmaster General.)

TRANSFER OF CLERKS FROM POST OFFICES TO THE RAILWAY MAIL SERVICE.

To provide for transferring clerks from post offices of the first and second classes to the Railway Mail Service at salaries higher than the lowest in the Railway Mail Service:

That hereafter the Postmaster General may transfer, under such regulations as he may prescribe, clerks from post offices of the first and second classes to the Railway Mail Service at salaries not exceeding the salary which the clerks are receiving in the post offices at the time of such transfer.

LEAVE WITH PAY ON ACCOUNT OF SICKNESS TO RAILWAY POSTAL CLERKS.

To extend the provisions of existing law so as to allow railway postal clerks leave of absence with pay on account of sickness, substitutes to be provided at the expense of the Government, instead of at the expense of the clerks:

That hereafter the Postmaster General may allow leave of absence with pay, not exceeding thirty days in any one fiscal year, to any railway postal clerk on account of personal illness, the substitute clerk in such case to be provided at the expense of the Government. (See Report of Second Assistant Postmaster General.)

SUBSTITUTION OF WEIGHTS OF MAILS FOR WEIGHTS NOT TAKEN OR OMITTED.

To enable the Postmaster General to substitute estimated weights in cases where because of interruptions in service on account of floods or other causes the weights taken are shown

to have been below the normal or the mails were not weighed, the estimated weights to be based on the average weights for the normal period.

That when, during a weighing period, on account of floods or other causes, interruptions in service occur on railroad routes and weights of mail are decreased below the normal, or where there is an omission to take weights, the Postmaster General, for the purpose of readjusting compensation on such railroad routes as are affected thereby, is hereafter authorized, in his discretion, to add to the weights of mails ascertained on such routes during that part of the weighing period when conditions are shown to have been normal the estimated weights for that part of the weighing period when conditions are shown to have been not normal or where there has been an omission to take weights, based upon the average of weights taken during that part of the weighing period during which conditions are shown to have been normal, the actual weights and the estimated weights to form the basis for the average weight per day upon which to readjust the compensation according to law on such railroad routes for the transportation of the mails, notwithstanding the provision of the act of Congress approved March third, nineteen hundred and five, requiring that the average weight shall be ascertained by the actual weighing of the mails for such a number of successive working-days, not less than ninety, as the Postmaster General may direct: *Provided further*, That readjustments from July first, nineteen hundred and thirteen, may be made under this provision on routes in the first section affected by the floods in the Ohio Valley and tributary territory commencing about March twenty-fifth, nineteen hundred and thirteen. (See Report of Second Assistant Postmaster General.)

READJUSTMENTS FOR DIVERSIONS OF MAIL.

To amend existing law by repealing the provision of section 4 of the act of August 4, 1912, limiting readjustments for diversions of mails to cases where the diverted mails equal at least 10 per cent of the average daily weight on any of the routes affected:

So much of section four of an "Act making appropriations for the service of the Post Office Department for the fiscal year ending June thirtieth, nineteen hundred and thirteen, and for other purposes," approved August twenty-fourth, nineteen hundred and twelve, as provides that no adjustment shall be made unless the diverted mails equal at least ten per centum of the average daily weight on any of the routes affected is hereby repealed. (See Report of Second Assistant Postmaster General.)

EXTENSION OF PENALTY PRIVILEGE TO OFFICIAL MAIL OF THE POSTAL SAVINGS SYSTEM AND REPEAL OF PROVISION FOR ADDITIONAL COMPENSATION TO POSTMASTERS.

To extend the use of penalty envelopes to official mail of the Postal Savings System and to repeal the provision of law allowing additional compensation to postmasters at offices of the fourth class for the transaction of postal savings depository business:

That sections two and thirteen of the act approved June twenty-fifth, nineteen hundred and ten, entitled "An act to establish postal savings depositories for depositing savings at interest with the security of the Government for repayment thereof, and for other purposes," be hereby amended to read as follows:

SEC. 2. That the provisions of section three of the act of July fifth, eighteen hundred and eighty-four, entitled "An act making appropriations for the service of the Post

Office Department for the fiscal year ending June thirtieth, eighteen hundred and eighty-five, and for other purposes," are hereby extended and made applicable to all official mail matter pertaining to the business of the Postal Savings System; and hereafter the board of trustees for the control, supervision, and administration of the postal savings depository system shall not be required to show in the annual report prescribed by section one of the act of June twenty-fifth, nineteen hundred and ten, establishing such system, the amount of work done for that system by the Post Office Department and postal service in the transportation of free mail.

SEC. 13. Postmasters, assistant postmasters, clerks, or other employees at post offices of the presidential grade and postmasters at post offices of the fourth class shall not be allowed or paid any additional compensation for the transaction of postal savings depository business. (See also Report of Third Assistant Postmaster General.)

REMOVAL OF LIMITATION ON A POSTAL SAVINGS DEPOSIT.

To remove the restriction on the amount that may be accepted as a postal savings deposit from one depositor, with the proviso that interest shall not be paid on more than $1,000:

That such part of section six of the act approved June twenty-fifth, nineteen hundred and ten, authorizing a system of postal savings depositories, as provides that "no one shall be permitted to deposit more than $100 in any one calendar month" is hereby repealed, and said act is further amended so as to repeal the proviso in section seven thereof and insert in lieu of such proviso the following: "*Provided*, That no interest shall be paid on such part of the balance to the credit of any person as is in excess of $1,000." (See also Report of Third Assistant Postmaster General.)

REIMBURSEMENT OF POSTMASTERS FOR CERTAIN LOSSES.

To authorize the reimbursement of postmasters for certain losses of postal-savings funds, cards, stamps, and certain other funds:

That the act authorizing the Postmaster General to adjust certain claims of postmasters for loss by burglary, fire, or other unavoidable casualty, approved May nine, eighteen hundred and eighty-eight, as amended by the act of June eleven, eighteen hundred and ninety-six, be so amended as to include losses by burglary, fire, or other unavoidable casualty, of postal-savings funds, postal-savings cards, postal-savings stamps, postal-savings certificates, key-deposit funds, funds deposited to cover postage on mailings, and funds received as deposits to cover orders for stamped envelopes. (See also Reports of Third Assistant Postmaster General and Assistant Attorney General for Post Office Department.)

PAYMENT OF POSTAL MONEY ORDERS.

To authorize the issuance of postal money orders payable at any money-order office by amending sections 4029 and 4037 of the Revised Statutes and the act of January 27, 1894, in order—

That, under such rules and regulations as the Postmaster General shall prescribe, postal money orders may be issued payable at any money-order post office, and on and after the date upon which such rules and regulations become effective all money orders shall be legally payable at any money-order post office, although drawn on a specified office; and that all laws or parts of laws in conflict herewith are hereby repealed. (See also Report of Third Assistant Postmaster General.)

PAYMENT TO CARRIER WHEN CONTRACTOR FOR STAR SERVICE FAILS TO PAY.

To enable the department to expedite payments to carriers on star-mail routes who have performed service for contractors and have not been paid the amounts due them:

That the third proviso of the act of May 4, 1882 (22 Stat. L., ch. 116, p. 54), be amended as follows:

If any person shall hereafter perform any service for any contractor or subcontractor in carrying the mail, he shall, upon filing in the department his contract for such service and satisfactory evidence of its performance, thereafter have a lien on any money due such contractor or subcontractor for such service to the amount of same; and if such contractor or subcontractor shall fail to pay the party or parties who have performed service as aforesaid the amount due for such service within two months after the expiration of the *month* in which such service shall have been performed the Postmaster General may cause the amount due to be paid said party or parties and charged to the contractor: *Provided*, That such payment shall not in any case exceed the rate of pay per annum of the contractor or subcontractor. (See Report of the Fourth Assistant Postmaster General.)

TEMPORARY STAR SERVICE.

To meet the requirements of the act of August 3, 1892, and to render it possible to employ temporary service on all star mail routes, under all conditions, the act of July 26, 1882, is amended so—

That temporary mail service rendered necessary by reason of the failure of any bidder or contractor to perform the service awarded to him may be provided by the Postmaster General without advertisement, on such terms as he may deem reasonable, at the expense of any such failing bidder or contractor, and all laws or parts of laws inconsistent herewith are hereby repealed. (See Report of Fourth Assistant Postmaster General.)

TRANSPORTATION FOR STAR SERVICE.

To permit the department to prescribe the mode of transportation where necessary on star mail routes:

That section 3949 of the Revised Statutes be amended to read as follows:

All contracts for carrying the mail should be in the name of the United States, and shall be awarded to the lowest bidder tendering sufficient guaranties for faithful performance in accordance with the terms of the advertisement: *Provided, however*, That such contracts require due celerity, certainty, and security in the performance of the service; but the Postmaster General shall not be bound to consider the bid of any person who has willfully or negligently failed to perform a former contract. (See Report of Fourth Assistant Postmaster General.)

PROTECTION OF MAIL BOXES.

To give ample protection to all boxes intended or used for the receipt or delivery of mail on any mail route:

That the act of March 4, 1909 (chap. 321, sec. 198, 35 Stat., 1126), be amended to read as follows:

Whoever shall willfully injure, tear down, or destroy any letter box, pillar box, lock box, lock drawer, or other receptacle established or approved by the Postmaster

General for the safe deposit of matter for the mail or for delivery, or any lock or similar device belonging or attached thereto, or any letter box or other receptacle intended or used for the receipt or delivery of mail matter on any rural delivery route, star route, or other mail route, or shall break open the same; or shall willfully injure, deface, or destroy any mail matter deposited in any letter box, pillar box, lock box, lock drawer, or other receptacle established or approved by the Postmaster General for the safe deposit of matter for the mail or for delivery; or shall willfully take or steal such matter from or out of any such letter box, pillar box, lock box, lock drawer, or other receptacle; or shall willfully injure, deface, or destroy any mail matter deposited in any letter box or other receptacle intended or used for the receipt or delivery of mail matter on any rural delivery route, star route, or other mail route, or shall willfully and maliciously assault any letter or mail carrier, knowing him to be such, while engaged on his route in the discharge of his duty as such carrier, or shall willfully aid or assist in any offense defined in this section, shall be fined not more than one thousand dollars or imprisoned not more than three years, or both. (See Report of Fourth Assistant Postmaster General.)

DISPOSITION OF DEAD MAIL.

To facilitate the disposition of undeliverable letters and to avoid their accumulation in the Division of Dead Letters beyond a period when reclamation is not desired:

That section 3938 of the Revised Statutes be amended to read as follows:

Dead letters containing valuable inclosures shall be recorded in the Division of Dead Letters, and when they can not be delivered to the addressee or to the sender shall be subject to reclamation for one year from the date of record. If within said period they have not been reclaimed, such letters shall be disposed of as the Postmaster General may direct. All other undeliverable letters, unless posted for transmission by registered mail, shall be disposed of without record and not held for reclamation in that division. (See Report of Fourth Assistant Postmaster General.)

FRAUDULENT DEVICES AND LOTTERY PARAPHERNALIA.

To exclude from the mails fraudulent devices and lottery paraphernalia, and matter relating thereto, amend section 3929, Revised Statutes, as amended, to read as follows:

SEC. 3929. The Postmaster General may, upon evidence satisfactory to him that any person or company is engaged in conducting any lottery, gift enterprise, or scheme for the distribution of money, or of any real or personal property by lot, chance, or drawing of any kind, or that any person or company is conducting any other scheme or device for obtaining money or property of any kind through the mails by means of false or fraudulent pretenses, representations, or promises or that any person or company is sending through the mails paraphernalia designed or intended for the conduct of a lottery, or matter relating thereto, or that any person or company is selling or offering for sale through the mails "unfair" or cheating gambling devices or appliances, or is sending such devices or appliances through the mails, instruct postmasters at any post office at which letters or other matter may arrive directed to any such person or company, or to the agent or representative of any such person or company, whether such agent or representative is acting as an individual or as a firm, bank, corporation, or association of any kind, to return all such registered letters to the postmaster at the office at which they were originally

mailed, with the word "Fraudulent" plainly written or stamped upon the outside thereof, and all such letters so returned to such postmasters shall be by them returned to the writers thereof, under such regulations as the Postmaster General may prescribe. But nothing contained in this section shall be so construed as to authorize any postmaster or other person to open any letter not addressed to himself. The public advertisement by such person or company so conducting such lottery, gift enterprise, scheme, or device that remittances for the same may be made by registered letters to any other person, firm, bank, corporation, or association named therein shall be held to be prima facie evidence of the existence of said agency by all the parties named therein; but the Postmaster General shall not be precluded from ascertaining the existence of such agency in any other legal way satisfatory to himself.

Amend section 4041, Revised Statutes, as amended, to read as follows:

SEC. 4041. The Postmaster General may, upon evidence satisfactory to him that any person or company is engaged in conducting any lottery, gift enterprise, or scheme for the distribution of money, or of any real or personal property by lot, chance, or drawing of any kind, or that any person or company is conducting any other scheme for obtaining money or property of any kind through the mails by means of false or fraudulent pretenses, representations, or promises, or that any person or company is sending through the mails paraphernalia designed or intended for the conduct of a lottery, or matter relating thereto, or that any person or company is selling or offering for sale through the mails "unfair" or cheating gambling devices or appliances, or is sending such devices or appliances through the mails, forbid the payment by any postmaster to said person or company of any postal money orders drawn to his or its order, or in his or its favor, or to the agent of any such person or company, whether such agent is acting as an individual or as a firm, bank, corporation, or association of any kind, and may provide by regulation for the return to the remitters of the sums named in such money orders. But this shall not authorize any person to open any letter not addressed to himself. The public advertisement by such person or company so conducting any such lottery, gift enterprise, scheme, or device, that remittances for the same may be made by means of postal money orders to any other person, firm, bank, corporation, or association named therein shall be held to be prima facie evidence of the existence of said agency by all the parties named therein; but the Postmaster General shall not be precluded from ascertaining the existence of such agency in any other legal way.

Amend section 213, act of March 4, 1909 (criminal code) to read as follows:

SEC. 213. No letter, package, postal card, or circular concerning any lottery, gift enterprise, or similar scheme offering prizes dependent in whole or in part upon lot or chance; and no lottery ticket or part thereof, or paper, certificate, or instrument purporting to be or to represent a ticket, chance, share, or interest in or dependent upon the event of a lottery, gift enterprise, or similar scheme offering prizes dependent in whole or in part upon lot or chance; and no paraphernalia designed or intended for the conduct of such a scheme, or matter relating thereto; and no check, draft, bill, money, postal note, or money order, for the purchase of any ticket or part thereof, or of any share or chance in any such lottery, gift enterprise, or scheme; and no newspaper, circular, pamphlet, or publication of any kind containing any advertisement of any lottery, gift enterprise, or scheme of any kind offering prizes dependent in whole or in part

upon lot or chance, or containing any list of the prizes drawn or awarded by means of any such lottery, gift enterprise, or scheme, whether said list contains any part or all of such prizes, shall be deposited in or carried by the mails of the United States or be delivered by any postmaster or letter carrier. Whoever shall knowingly deposit or cause to be deposited, or shall knowingly send or cause to be sent, anything to be conveyed or delivered by mail in violation of the provisions of this section, or shall knowingly deliver or cause to be delivered by mail anything herein forbidden to be carried by mail, shall be fined not more than one thousand dollars, or imprisoned not more than two years, or both; and for any subsequent offense shall be imprisoned not more than five years. Any person violating any provision of this section may be tried and punished either in the district in which the unlawful matter or publication was mailed, or to which it was carried by mail for delivery according to the direction thereon, or in which it was caused to be delivered by mail to the person to whom it was addressed.

And amend section 215 act of March 4, 1909 (criminal code), to read as follows:

SEC. 215. Whoever, having devised or intending to devise any scheme or artifice to defraud, or for obtaining money or property by means of false or fraudulent pretenses, representations, or promises, or to sell, dispose of, loan, exchange, alter, give away, distribute, supply, or furnish or procure for unlawful use any counterfeit or spurious coin, bank note, paper money, or any obligation or security of the United States, or of any State, Territory, municipality, company, corporation, or person, or anything represented to be or intimated or held out to be such counterfeit or spurious article, or any cheating, gambling device or appliance, or any scheme or artifice to obtain money by or through correspondence, by what is commonly called the "saw-dust swindle," or "counterfeit-money fraud," or by dealing or pretending to deal in what is commonly called "green articles," "gree coin," "green goods," "bills," "paper goods," "spurious Treasury notes," "United States goods," "green cigars," or any other names or terms intended to be understood as relating to such counterfeit or spurious articles, shall, for the purpose of executing such scheme or artifice or attempting so to do, place, or cause to be placed, any letter, postal card, package, writing, circular, pamphlet, or advertisement, whether addressed to any person residing within or outside the United States, in any post office, or station thereof, or street or other letter box of the United States, or authorized depository for mail matter, to be sent or delivered by the post office establishment of the United States, or shall take or receive any such therefrom, whether mailed within or without the United States, or shall knowingly cause to be delivered by mail according to the direction thereon, or at the place at which it is directed to be delivered by the person to whom it is addressed, any such letter, postal card, package, writing, circular, pamphlet, or advertisement, shall be fined not more than $1,000, or imprisoned not more than five years, or both.

For a more detailed account of the operations of the several branches of the postal service during the year attention is invited to the annual reports of the four Assistant Postmasters General, the Assistant Attorney General, the Purchasing Agent, and the Chief Inspector.

Respectfully,

A. S. BURLESON,
Postmaster General.

REPORT OF THE FIRST ASSISTANT POSTMASTER GENERAL.

POST OFFICE DEPARTMENT,
FIRST ASSISTANT POSTMASTER GENERAL,
Washington, December 11, 1913.

SIR: I have the honor to submit the annual report of this bureau for the fiscal year ended June 30, 1913.

THE POST-OFFICE SERVICE.

The total number of post offices of all classes in operation on July 1, 1913, was 58,020, a decrease as compared with the preceding year of 709.

The readjustment of presidential postmasters' salaries on the basis of the gross receipts for the four quarters ended March 31, 1913, resulted in the assignment to the presidential classes on July 1, 1913, of 8,406 offices, an increase of 179 over July 1, 1912. (Table 3, page 22.)

During the fiscal year 1,528 postmasters were appointed at presidential offices and 7,014 at offices of the fourth class.

The number of assistant postmasters at first and second class offices was but slightly changed during the year, the increase being from 2,329 to 2,362; the number of regular clerks increased from 33,714 to 35,486, and the number of regular carriers at city delivery offices from 29,962 to 30,923.

The number of regular clerks appointed during the year was 4,689. Of these 2,823 were appointed to fill vacancies, so that the actual increase in the clerical force was 1,866. There were 2,337 regular appointments to the carrier force, of which 1,362 were to fill vacancies, leaving the actual increase 975.

For the salaries of presidential postmasters the annual rate of expenditure on July 1, 1913, was $14,965,500, distributed as follows: First class, $1,728,100; second class, $4,682,000; and third class, $8,555,400. The increase over the annual rate for July 1, 1912, was $398,800.

The cost during the year of promoting clerks in first and second class post offices in accordance with the act of March 2, 1907, was $1,543,050, and for the promotion of carriers at city delivery offices, $1,163,250. The cost of promoting the supervisory employees was $95,900. The increase in the cost of clerk hire at first and second class offices was $2,171,025, making the total expenditure for this purpose $37,740,436; and the increase for letter carriers was $2,021,525, making the total expenditure for this purpose, $34,812,891. The average salary of clerks increased during the year from $1,041.99 to $1,052.97 and carriers from $1,080.22 to $1,087.57.

City Delivery Service was extended to 62 additional offices, but as eight city delivery offices were consolidated during the year with other post offices at which the service was already in operation, the net increase in the number of city delivery offices was 54. The total number of offices at which city delivery service was in operation on June 30, 1913, was 1,675.

Appended to this report will be found tables of statistical data relative to the development and present condition of those branches of the postal service discussed in this report.

ADMINISTRATIVE CHANGES.

With a view to a more logical assignment of duties and hence in the interest of efficiency the supervision over the rental of post-office boxes and key deposits, the Navy Mail Service, the rental and purchase of canceling machines, and the allowances for supplies, such as soap, towels, articles for cleaning, etc., has been transferred to other bureaus of the department.

The rates of rental on post-office boxes are fixed automatically on the basis of the gross receipts of offices and by the terms of their agreements lessors are required to provide the required number of boxes. The care of the funds is primarily a financial responsibility and the work incident to this subject has therefore been transferred to the Division of Finance, Bureau of the Third Assistant.

The work incident to the appointment and bonding of navy mail clerks has been transferred to the Bureau of the Second Assistant, Division of Foreign Mails, to be handled in connection with the sea post service.

The authorizing of allowances for supplies, such as soap, towels, and articles for cleaning, which are purchased locally by postmasters, and also the work incident to the rental and purchase of canceling machines, have been transferred to the Bureau of the Fourth Assistant, Division of Supplies, to be handled in conjunction with other matters relating to supplies and equipment for post offices.

APPOINTMENT OF POSTMASTERS.

PRESIDENTIAL.

Presidential postmasters to the number of 1,528 were appointed during the last fiscal year, as follows: One hundred and ninety-two on account of resignation, 114 on account of deaths, 60 on account of removals, 966 on account of the expiration of four-year commissions, 49 on account of the expiration of recess commissions, 4 on account of the change of name of post offices, and 143 at offices advanced to the presidential grade. Of the 1,528 appointments made during the year, 1,181 were made subsequent to March 4, 1913.

Before a single presidential postmaster was appointed under this administration, announcement was made that no person would be appointed to the position of postmaster who would not give his personal attention and business time to his official duties, nor would any person be considered eligible for appointment who was not physically and mentally capable of participating actively in the work of his office. At that time the commissions of 1,818 presidential postmasters had expired, and the selection of suitable persons for these positions has taxed the energy of the bureau to the utmost. During the period between March 4 and June 30, 1,785 persons were selected for appointment as presidential postmasters and their nominations prepared and sent to the President for transmission to the Senate. More than 600 of these, however, were not confirmed by the Senate in time to qualify and assume their duties prior to July 1. Many thousands of applications, indorsements, and petitions were received pertaining to these appointments. The papers involved were carefully read, acknowledged, and their purport briefed for the consideration of the Postmaster General and the President,

and no person has been appointed as postmaster at a presidential office who has failed to satisfy the department as to his capacity for efficient service and his purpose to render service commensurate with the salary of the office.

FOURTH CLASS

Postmasters were appointed at 7,014 fourth-class offices as follows: Four thousand six hundred and thirty-three on account of resignations, 484 on account of deaths, 605 on account of removals, 47 on account of the relegation of offices to the fourth class, 985 on account of the establishment of new offices, 154 on account of the change of name of post offices, and 106 on account of the change of name of postmasters.

On October 15, 1912, President Taft issued an order classifying all postmasters at fourth-class offices who had not already been covered into the classified service by the Executive order of November 30, 1908, excepting only those in Alaska, Guam, Hawaii, Porto Rico, and Samoa. The regulations then governing this class of appointments were amended by President Taft's order so as to require the selection for appointment to fill vacancies at offices paying as much as $500 annually to be made from the three eligibles standing highest as a result of a civil-service examination, and the appointments at offices paying less than $500 annually to be made upon the recommendation of post-office inspectors. The effect of this order was to extend the benefits of civil-service classification to a large number of persons who had submitted to no test of fitness prior to their appointment and who therefore had no just title to such benefits. As this was in contravention of true civil-service principles, President Wilson issued an order on May 7, 1913, amending the previous orders by adding thereto the following:

No person occupying the position of postmaster of the fourth class shall be given a competitive classified status under the provisions of said orders unless he has been appointed as a result of open competitive examination, or under the regulations of November 25, 1912, or of January 20, 1909, or until he is so appointed.

At any post office of the fourth class where the present postmaster was appointed otherwise than as above set forth, appointment shall be made in accordance with the regulations approved November 25, 1912, as amended this date; and for this purpose the Civil Service Commission shall hold an open competitive examination for each such office having an annual compensation of as much as $180, such examinations for all such post offices to be held by States, as requested by the Postmaster General: *Provided*, That in the event that for any such examination less than three persons apply the Civil Service Commission may, in its discretion, authorize selection in accordance with the provisions of the regulations as amended this date governing selections for appointment to offices having annual compensation of less than $180; and in like manner the regulations of November 25, 1912, as amended this date, shall be applied to each office where the annual compensation is less than $180 and where the present incumbent was appointed otherwise than as above set forth.

Amended regulations were promulgated immediately upon the issuance of this order, and all appointments to fourth-class post offices have since been made in accordance therewith. The State-wide examinations ordered by the President are now being conducted by post-office inspectors for the offices paying less than $180 annually, and the Civil Service Commission will begin in January, 1914, to conduct the examinations for the offices paying as much as $180.

PARCEL-POST SERVICE.

The number of parcel-post packages handled during the first six months of the operation of this facility was at least 300,000,000. Based on an actual count made at the 50 largest post offices and on the assumption that more than one-half of the entire business is transacted at these offices (a ratio borne out by postal receipts), the number of parcels handled in January, 1913, the first month the service was in operation, was 38,730,826. On the same basis the number handled in April was estimated at 59,546,678, or an increase over January of 53.74 per cent. The estimate of 300,000,000 parcels for the six months is based on these figures with due allowance for the usual falling off in business during the summer months.

That this vast quantity of mail has been handled to the satisfaction of the public is evidenced by many expressions of commendation and the fact that few complaints of unsatisfactory service have been received.

When the parcel-post service was started no special plan was devised nor adequate additional equipment provided to insure its administration. Postmasters were authorized to employ such methods and means as might appear to be necessary for the proper transaction of the business, and they were thus left largely to their own resources to meet the demands of the service in their communities, with the understanding that the department would authorize such expenditures as might be required. As would naturally be expected, many different kinds of equipment and widely dissimilar methods were employed throughout the country. This fact, together with the enormous volume of new business the service was called upon to handle, putting into effect the new eight-hour law, and the restricted condition of the service generally resulting from the policy of retrenchment followed by the preceding administration, necessitated the expenditure of much larger sums during the quarter ended March 31 than Congress had provided. It therefore became necessary in April for the department to take steps toward securing additional appropriations for both temporary and auxiliary clerk hire and carrier service. A statement of the situation was laid before Congress in the early part of May and attention directed to the disastrous effect on the service that would result from the failure of the department to secure the needed relief. In May, 1913, Congress passed a joint resolution making immediately available the sum of $600,000 for these purposes. By the judicious expenditure of this money during the remainder of the fiscal year the department was able to remove all causes for complaint and to avert the serious condition that would have resulted from further curtailments of the service made necessary by lack of funds.

STANDARDIZATION OF METHODS.

The known dissimilarity in the equipment and methods in use led the department in April to institute an inquiry to determine the comparative cost of delivering parcel-post matter at the 50 largest post offices. The result of this inquiry is shown in the following table:

Parcel post delivery at the 50 largest post offices—Apr. 14 to 19, 1913.

Post office.	Total number pieces delivered.	Delivery by—												Population served.	Deductions.				
		Motor vehicles.				Horse-drawn vehicles.				Other conveyances.					Per cent delivered by regular carriers.	Per cent delivered by conveyance.	Average cost of delivery by conveyance.	Added cost per piece, all fourth-class mail.	Population per piece delivered by conveyances.
		Number parcels.	Per cent.	Total extra cost.	Cost per parcel.	Number parcels.	Per cent.	Total extra cost.	Cost per parcel.	Number parcels.	Per cent.	Total extra cost.	Cost per parcel.						
					Cents.				Cents.				Cents.				Cents.	Cents.	
1. New York, N. Y	268,457	15,222	5.6	$859.50	5.6	27,824	10.4	$594.30	2.1					5,301,524	84.0	16.0	3.3	0.0054	1,477
2. Chicago, Ill	179,328					23,399	13.1	601.50	2.5	1,640	0.9	$59.53	3.6	2,646,141	86.0	14.0	2.6	.0037	1,267
3. Philadelphia, Pa	104,064	22,912	22.0	1,290.11	5.6									2,014,982	78.0	22.0	5.6	.0124	1,055
4. Boston, Mass	139,607	625	.5	30.98	4.8	53,347	38.2	2,079.90	3.9					1,448,503	61.3	38.7	3.9	.0152	322
5. St. Louis, Mo	54,109	5,085	9.4	426.40	8.4	8,994	16.6	311.60	3.4	170	.3			732,000	73.7	26.3	5.1	.0136	615
6. Pittsburgh, Pa	40,945					3,377	8.2	145.15	4.3	2,131	5.2	94.12	4.8	640,500	86.6	13.4	4.3	.0058	1,393
7. Brooklyn, N. Y	84,171	6,686	7.9	359.12	5.3	7,149	8.5	336.45	4.7	1,511	1.8	58.55	3.8	1,876,307	81.8	18.2	4.9	.0089	1,467
8. Cleveland, Ohio	38,163	3,667	9.6	312.00	8.5	2,383	6.2	78.60	3.2					636,400	84.2	15.8	6.4	.0103	1,262
9. San Francisco, Cal	26,955	2,009	7.4	298.58	14.9	4,274	15.9	181.40	4.2					425,000	76.7	23.3	7.6	.0178	812
10. Cincinnati, Ohio	30,063	3,103	10.3	447.30	14.4	8,504	28.3	241.50	2.8					422,441	61.4	88.6	5.9	.0229	436
11. Detroit, Mich	57,691	15,918	27.6	895.87	5.6					147	.3			562,425	72.1	28.9	5.6	.0151	562
12. Kansas City, Mo	29,534													315,000	100.0				
13. Baltimore, Md	40,555					9,806	24.2	347.23	3.5					654,065	75.8	24.2	3.5	.0086	800
14. Minneapolis, Minn	24,239	2,344	9.7	134.30	5.5	4,503	18.6	81.80	1.7					318,000	71.7	28.3	3.1	.0090	558
15. Buffalo, N. Y	39,255					8,433	21.5	392.10	4.7	10				458,000	78.5	21.5	4.7	.0099	651
16. Los Angeles, Cal	24,228	2,528	10.4	189.20	7.5	2,141	8.8	105.35	4.5					295,000	80.8	19.2	5.9	.0121	759
17. Milwaukee, Wis	29,051					5,657	19.5	208.42	3.6					385,990	80.5	19.5	3.6	.0071	817
18. Washington, D. C	26,690	5,664	21.2	286.37	5.0									350,000	78.8	21.2	5.0	.0107	742
19. Indianapolis, Ind	15,733	5,029	32.0	307.30	6.1	289	1.8			75	.5			260,715	65.7	34.3	5.6	.0195	580
20. St. Paul, Minn	14,804	1,793	12.1	50.70	2.8	1,957	13.2	52.95	2.6	963	6.5			225,000	68.2	31.8	2.2	.0070	573
21. Denver, Colo	26,080					3,103	11.9	143.60	4.6	54	.2			214,000	87.9	12.1	4.5	.0055	813
22. Newark, N. J	17,827					3,534	19.8	158.55	4.4					429,687	80.2	19.8	4.4	.0089	1,462
23. Atlanta, Ga	11,401	959	8.4	91.80	9.5	2,840	24.9	83.30	2.9	99	.9			179,780	65.8	34.2	4.4	.0154	568
24. Rochester, N. Y	27,512	1,287	4.7	51.97	4.0	4,350	15.8	170.90	3.9					228,500	79.5	20.5	3.9	.0081	487
25. Louisville, Ky	15,757					2,761	17.5	111.80	4.0					243,662	82.5	17.5	4.0	.0071	1,059
26. New Orleans, La	11,749	3,149	26.8	158.30	5.0									322,277	73.2	26.8	5.0	.0135	1,230
27. Omaha, Nebr	12,304													150,000	100.0				
28. Portland, Oreg	12,459	1,313	10.5	72.39	5.5	228	1.8	4.23	1.8					250,000	87.7	12.3	5.0	.0061	1,938
29. Seattle, Wash	16,201					1,774	10.9	42.75	2.4					230,000	89.1	10.9	2.4	.0027	1,554
30. Columbus, Ohio	10,941	2,980	27.2	163.20	5.4					47	.4			200,000	72.4	27.6	5.4	.0149	796
31. Providence, R. I	18,682					6,273	33.6	187.48	2.9					274,642	66.4	33.6	2.9	.0100	524
32. Des Moines, Iowa	8,994	2,386	26.5	49.83	2.0									96,662	73.5	26.5	2.0	.0055	486

33. Toledo, Ohio	14,857	3,979	26.8	79.66	2.0	337	2.3	8.87	2.6	41	.8			223,000	70.6	29.4	2.0	.0059		614
34. Dallas, Tex	10,608	2,443	23.0	107.38	4.3	1,119	10.5	24.90	2.1	61	.6			96,905	65.9	34.1	3.6	.0125		321
35. Richmond, Va	10,169					2,553	24.9	83.30	2.9	99	.9			160,000	74.4	25.6	3.1	.0081		724
36. Memphis, Tenn	13,299	3,013	22.7	126.00	4.1	1,543	11.6	39.80	2.5	31	.2			200,000	65.5	34.5	3.6	.0125		523
37. Dayton, Ohio	5,621					1,269	22.6	107.20	8.4					113,000	77.4	22.6	8.4	.0190		1,075
38. Syracuse, N. Y	15,819	1,065	6.7	68.00	6.4	792	5.0	39.10	4.9	749	4.7	11.36	1.5	151,284	83.6	16.4	4.5	.0075		698
39. Hartford, Conn	10,147					3,058	30.1	84.60	2.7	72	.7			120,000	69.2	30.8	2.7	.0083		459
40. New Haven, Conn	12,436					2,251	18.1	89.94	4.8	44	.4			147,628	81.5	18.5	3.9	.0072		773
41. Nashville, Tenn	10,175	2,159	21.2	38.40	1.7					1,321	13.0	28.95	2.2	150,000	65.8	34.5	1.9	.0038		832
42. Springfield, Mass	8,243	1,119	13.6	97.39	8.7	948	11.5	29.60	3.1	24	.3			97,000	74.6	25.4	6.0	.0154		557
43. Albany, N. Y	15,032	3,113	20.6	88.20	2.1									101,228	79.4	20.6	2.1	.0057		390
44. Jersey City, N. J	13,722					4,775	34.8	47.70	1.0					234,040	65.2	24.8	1.0	.0034		588
45. Grand Rapids, Mich	11,127					4,478	40.2	146.30	3.2					130,000	59.8	40.2	3.2	.0130		348
46. Houston, Tex	7,000					1,232	7.6	55.10	4.4					99,134	82.4	17.6	4.4	.0078		962
47. Jacksonville, Fla	4,957					916	18.5	21.04	2.3	1,422	28.7			65,000	52.8	41.2	2.3	.0042		333
48. Worcester, Mass	10,052					1,414	14.1	48.80	3.3	1,072	10.6			150,000	75.3	24.7	3.3	.0048		727
49. Spokane, Wash	6,038					987	16.3	33.48	3.3	50	.8			105,000	82.9	17.1	3.3	.0055		1,221
50. Salt Lake City, Utah	7,878					1,149	14.6	47.00	4.0					102,677	85.4	14.6	4.0	.0059		1,081
Total	1,644,669	121,550		7,079.75		225,721		7,566.61		11,833		252.51								
Average cost per piece					5.82				3.35								4.14	.0090		

(Statistics compiled from the reports of the same offices, based on a record of the number of parcels and the cost of handling between October 1 and 15, inclusive, show that since April the average cost per parcel of delivery by automobile has been reduced from 5.82 to 5 cents; by horse-drawn vehicle from 3.35 to 3.3 cents, and the average cost per parcel of delivery by all vehicles from 4.14 to 3.9 cents. This result is especially gratifying since the changes in postage rates and weight limit, which became effective on August 15, have increased the average weight of the parcels from 1.02 to 1.07 pounds.)

Personal investigations by officials of the department disclosed the fact that these varying costs of delivery were due largely to a lack of uniformity in equipment and methods employed, and to faulty organizations of personnel. The condition existing in the field service in general showed clearly the imperative need for standardized equipment, uniform methods, and more efficient organizations of personnel. In order to remedy this condition, it has been decided to conduct a series of special investigations to establish standard methods, equipment, and organization, for adoption in all offices, with such modifications as local conditions make necessary. For this purpose the country has been divided into three general sections—East, Middle West, and West. To each of these sections departmental officials of special experience and qualifications and post-office inspectors will be dispatched to cooperate with the postmasters in making a special study of mail handling in all of its stages to determine the most efficient as well as the most economical methods for transacting the postal business. Labor-saving devices and other mechanical apparatus for postal purposes will be tested and the discoveries and improved methods resulting from these investigations will be brought immediately to the attention of all postmasters by means of bulletins issued at frequent intervals. In this way the entire service will receive from time to time the benefit of the study and experiments carried on at designated offices.

The post office at Baltimore, Md., has been selected as the first of these offices because its location affords opportunity for more frequent conferences with departmental officers and also because the commercial interests of Baltimore make that office fairly representative of the highest type of post office. The progress so far made in Baltimore gives promise of excellent results throughout the service from the proposed plan of operation.

GOVERNMENT-OWNED MOTOR VEHICLES.

The rapid growth of the parcel-post service since January 1 last has made it necessary for the department to give more serious consideration than ever before to the collection and delivery features of the service. Carriers on foot are able to deliver only about 75 per cent of the parcel-post mail. It is therefore necessary to employ vehicles for this purpose and both horse-drawn and motor conveyances are now being operated under rental contracts.

The horse-drawn vehicle is the least expensive, but the territory it can cover is very limited. The motor vehicle, on the other hand, is capable of covering greater distances and for many other reasons

is more desirable, but the extra cost on a rental basis adds disproportionately to the expense of delivery.

Because of the increasing average weight of parcels and the consequent increasing need for vehicles, the department has undertaken to ascertain the comparative cost between operating rented and Government-owned motor vehicles. For this purpose twenty 1,500-pound automobiles have been purchased and are being operated for parcel-post delivery and general collection service as follows: Three each in Baltimore, Md., and Brooklyn, N. Y.; 2 each in Buffalo, N. Y., and Louisville, Ky.; 4 in Minneapolis, Minn., and 6 in Philadelphia, Pa.

Twenty-one 800-pound three-wheeled motor vehicles have also been purchased and assigned as follows: Five to Baltimore, Md.; 4 to Buffalo, N. Y.; 3 each to Louisville, Ky., and Nashville, Tenn., and 2 each to Atlanta, Ga., Columbus, Ohio, and Detroit, Mich.

It is proposed to train the carriers in the operation of smaller machines and to use them in suburban sections where it is believed they will prove both satisfactory and economical. The experiment has not progressed sufficiently to determine at this time the advisability of further purchases.

OPERATION OF THE EIGHT-HOUR LAW.

The appropriation act for the last fiscal year contained the following provision:

> That on and after March fourth, nineteen hundred and thirteen, letters carriers in the City Delivery Service and clerks in first and second class post offices shall be required to work not more than eight hours a day: *Provided*, That the eight hours of service shall not extend over a longer period than ten consecutive hours, and the schedules of duty of the employees shall be regulated accordingly.
>
> That in cases of emergency, or if the needs of the service require, letter carriers in the City Delivery Service and clerks in first and second class post offices can be required to work in excess of eight hours a day, and for such additional service they shall be paid extra in proportion to their salaries as fixed by law.

In pursuance of this law the department has readjusted the schedules of some 60,000 employees of first and second class post offices. Because of the varying schedules for the receipt and dispatch of mails, however, it has not been possible in numerous cases to arrange tours of duty for the clerks that will secure 8 hours of profitable service within a period of 10 consecutive hours. Consequently, it has been necessary in such cases either to work the clerks overtime or to employ an auxiliary force at the rate of 30 cents an hour.

In adjusting the schedules of the letter carriers it was necessary to rearrange the deliveries and to advance the afternoon deliveries in many instances from 30 to 60 minutes in order to keep the cost of the service within reasonable bounds. This action has resulted in frequent complaints from the business interests, to whom the latest possible afternoon delivery is of great importance.

Although the Comptroller of the Treasury ruled that the law does not apply to supervisory officers, either with respect to hours of duty or payment for overtime, the department has directed postmasters to arrange the schedules of this class of employees as nearly as possible on the same basis as the law prescribes for the clerks and carriers.

It has been suggested that much of the expense involved and many of the difficulties encountered in the administration of the pres-

ent eight-hour law could be eliminated if the law were amended so as to require 8 hours of service within a period of 11 or 12 consecutive hours instead of in 10. However, the satisfactory administration of the law will depend largely upon the painstaking efforts of the employees during the hours they are actually engaged, and it is believed that before suggesting amendments to the law the department should have the benefit of at least one year's observation of its effect.

COMPENSATORY TIME FOR SUNDAY SERVICE.

The act of August 24, 1912, prohibits the opening on Sunday of post offices of the first and second classes for the purpose of delivering ordinary mail to the general public, but authorizes, when the needs of the service require it, the employment on Sunday of city letter carriers and clerks at such offices, provided they be granted compensatory time for such service on one of the six succeeding days.

The enforcement of this law, particularly the latter clause, not only adds largely to the cost of the service but materially lessens its efficiency. Mails are received and dispatched at practically all first and second class offices on Sundays, and during certain hours this necessitates the employment of at least a part of the force. Under the law these employees must be granted compensatory time on one of the six succeeding days. Owing to the constant fluctuation in the postal business this legal requirement works materially to the detriment of the service. For instance, during the very busy periods, especially between October and May, in order to prevent an undue accumulation of mail in post offices it is necessary to require a considerable number of the employees to report for duty each Sunday. The granting of compensatory time to these employees during the succeeding week when the condition of the work urgently demands their presence and to employ inexperienced substitutes in their places results in a serious impairment of the efficiency of the force. The granting of compensatory time in New York City alone deprives that office of the services of about 190 clerks on every week day during the busy periods.

The department believes it would be in the interest of both the service and the employees to amend the law so as to provide for the granting of compensatory time for Sunday work when the employees can be most conveniently excused from duty.

EFFICIENCY RATINGS OF CLERKS AND CARRIERS.

Beginning July 1, 1909, a system for rating the efficiency of employees of the service was gradually placed in operation at all first and second class post offices. This system, although admittedly incomplete, has had a wholesome influence toward fixing merit and fitness as the basis for advancement in rank and grade. It is believed, however, that it has tended more toward establishing uniform penalties for delinquencies on the part of the employees than toward standardizing throughout the service the factors upon which the ratings for efficiency should be based. A careful study is now being made of this subject, and it is intended during the present fiscal year to evolve and put in operation an improved system that will insure merit and fitness as the sole basis of all promotions.

An equitable system for rating efficiency should embrace a test of the employees on their knowledge of the laws, regulations, and orders governing their respective duties. It is proposed to include such a test in the plan now being devised. In order that the employees may be prepared to meet this condition, a compact manual is being prepared for clerks and city letter carriers which will contain the laws, regulations, and other information essential to a full knowledge of their duties. The manual is rapidly approaching completion and will be ready for distribution shortly after January 1, 1914.

EXPERIMENTAL VILLAGE DELIVERY SERVICE.

The Post Office appropriation act for 1913 contained the following provision:

> That after June thirtieth, nineteen hundred and twelve, experimental mail delivery may be established, under such regulations as the Postmaster General may prescribe, in towns and villages having post offices of the second or third class that are not by law now entitled to free delivery service, and the sum of one hundred thousand dollars is hereby appropriated to enable postmasters to employ the necessary assistance to deliver the mail in such villages, and the amount to be expended at any office shall not exceed one thousand eight hundred dollars a year.

For this purpose also the appropriation act for 1914 provided the sum of $150,000.

In pursuance of this law the department has endeavored to conduct an experiment that will demonstrate the feasibility of an efficient and economical mail delivery in towns and villages not entitled by law to city delivery service. On June 30 last experimental delivery service had been established at 101 post offices in 40 States. Of these offices, 18 were of the second class and 83 of the third class. The total number of carriers employed was 126.

In order that the experiment might be conducted under the most varied and hence most representative conditions no uniform requirements were fixed as a condition to the establishment of the service. As rapidly as the offices were selected for the experiment, post-office inspectors were detailed to investigate the local conditions, devise the plans best suited thereto, and assist the postmasters to put the same into operation. The instructions to inspectors contained no detailed plan of operation, but authorized the installation of the system which in the inspector's judgment was most adaptable to the community to be served. In order, however, that the cost of the service might be kept within proper bounds the department decided that not more than two and in most cases only one carrier should be employed, and that this carrier, when not delivering mail, should be required to perform other duties in the post office.

Patrons have shown an appreciation of this facility where it has been extended, but there has been a tendency to demand service of the same character as that rendered at city delivery offices. Furthermore, because of the time of arrival of the mails at some offices, and the established custom of the patrons to make frequent calls for their mail, it has not been possible with the limited force employed to render complete and entirely satisfactory service.

The extension of Rural or City Delivery Service fosters, as a rule, a greater use of the mails and increases postal receipts. This, however, has not resulted from the establishment of experimental delivery as

reports show an increase in revenue at these offices of only 2.65 per cent, which is no more than the ordinary annual increase in business. On the other hand, the present average cost of operating the experimental delivery service constitutes 11.86 per cent of the revenues of the office.

The average cost of the carriers now employed in this experimental service is $625 per annum. It is not probable, however, that this low rate can be maintained. The department has already been importuned to increase the salaries in many instances and in some cases the requests appear both reasonable and just. Under the law the carriers employed at the second-class offices must be classified civil service employees, and as they are required to pass the same examination as that held for city delivery offices they have a right to expect the same privileges enjoyed by other classified employees of the service, such as leaves of absence, annual promotions, etc. If these are granted and additional deliveries extended, the average cost per office will amount to at least $1,000 per annum. The majority of the towns and villages where the service is now in operation have population ranging from 1,500 to 1,800, and the average population of the towns having third-class offices is estimated at 1,200. It is conservatively estimated that the operation of a satisfactory mail delivery at all second and third class offices will cost the Government ultimately $10,000,000 a year.

City Delivery Service may now be established in any city which, according to the last census, had a population of 10,000 within its corporate limits, or where the receipts of the post office amounted to as much as $10,000 for the last fiscal year. The primary object of City Delivery Service is to prevent the congestion which would attend the effort to make a general delivery of mail at the post office.

Rural Delivery Service is provided for patrons of post offices of all classes residing in the rural districts, but the carriers in this service are not permitted to deliver mail to persons residing within a quarter of a mile of a post office located in an unincorporated village or within the corporate limits of any town or village. As rural routes emanate from practically all of the places where village delivery service would be desired, the carriers should be used to make such deliveries as may be desirable and feasible to the residents of the villages. The compensation of rural carriers, however, at this time is based on the length of their routes and to make them available for the service indicated their salaries should be based upon an eight-hour day. With this change these carriers could be used not only to supplement the general delivery service as indicated, but in many instances in the delivery of parcel-post matter as well, thus obviating the necessity for additional horse hire for the delivery of the larger packages. The compensation of rural carriers should therefore be changed from a mileage to an eight-hour basis and the carriers should be permitted to deliver mail regardless of the distance from the post office or the corporate limits of the city or town.

With this change of practice in view the estimates of appropriations for the fiscal year 1915 will not include the item of village delivery, and it is recommended that the service as now administered be discontinued on June 30, 1914.

SALARIES OF PRESIDENTIAL POSTMASTERS.

The law requires that the salaries of presidential postmasters shall be readjusted annually, to take effect at the beginning of the fiscal year, on the basis of the gross receipts of the respective post offices for the four quarters ending March 31. This leaves but three months in which to compute the salaries of more than 8,000 postmasters and to conduct investigations essential to a proper adjustment of the various allowances necessary at offices to be advanced to higher classes. It is therefore recommended that the law be amended so as to provide for the annual readjustment of presidential postmasters' salaries, at the rates now prescribed, on the basis of the gross receipts for the four quarters ending December 31.

The rigid policy of the department in regard to the daily service required of presidential postmasters has secured for the Government greater returns for the salaries paid than heretofore. However, the abnormal development of the service on account of the parcel post will so greatly increase the receipts of post offices (the basis upon which the salaries are now fixed) that it is believed a revision of the rates of compensation to postmasters will be warranted. With a view to determining the changes desirable in the present law, this subject will have careful attention during the current fiscal year.

STATIONS AND BRANCH POST OFFICES.

The establishment of stations and branch post offices is governed by the following laws:

The Postmaster General, when the public convenience requires it, may establish within any post-office delivery one or more branch offices (stations or substations) for the receipt and delivery of mail matter and the sale of stamps and envelopes; and he shall prescribe the rules and regulations for the government thereof. But no letter shall be sent for delivery to any branch office contrary to the request of the party to whom it is addressed.

2. No station, substation, or branch post office shall be established beyond the corporate limits or boundaries of any city or town in which the principal office to which such station, substation, or branch office is attached is located, except in cases of villages, towns, or cities of fifteen hundred or more inhabitants not distant more than five miles, as near as may be, from the outer boundary or limits of such city or town in which the principal office is located. * * * (Section 249, Postal Laws and Regulations (R. S. 3871 and 29 Stat., 313.)

* * * * * * *

2. No post office established at any county seat shall be abolished or discontinued by reason of any consolidation of post offices made by the Postmaster General under existing law * * *: *Provided, however*, That this provision shall not apply to the city of Cambridge, Massachusetts, or to Towson, Maryland. (Section 233 (R. S. 3864)).

It is earnestly recommended that these laws be repealed and that a law be enacted substantially as follows:

The Postmaster General may establish, under such rules and regulations as he may prescribe, one or more branch offices, nonaccounting offices, or stations of any post office for the transaction of such postal business as may be required for the convenience of the public.

The legislation desired will enable the department to simplify accounting and eliminate unnecessary correspondence and will tend toward a more efficient and economical administration. It would be possible under the suggested law to discontinue many

small independent post offices and establish in lieu thereof stations or nonaccounting branches of nearby large offices. These small branches would be under the direction of and receive their supplies from the main or central offices. This would eliminate the audit of the quarterly reports of these small independent post offices and would also relieve the department of a great burden of miscellaneous correspondence. The stations or nonaccounting branches could be conducted under names of the discontinued post offices and thus secure the identity of the towns and villages concerned. The salaries of the clerks in charge could be fixed on an annual basis, as is now done in the contract-station service. This would remove both the opportunity and the incentive for rendering cancellation reports not justified by the actual transactions of the offices, and for padding stamp sales or otherwise manipulating the stamp account for the ulterior purpose of increasing the emoluments of the postmaster.

INDEMNIFICATION OF INJURED EMPLOYEES.

Railway mail clerks who are injured while on duty are granted during the period of their disability leave of absence with full pay for one year and with half pay for such additional period as may be necessary thereafter not exceeding one year. The law also authorizes the payment of the sum of $2,000 to the estate of any railway mail clerk, post-office inspector, or sea post clerk who is killed in line of duty. Although the service of some is not as hazardous as those provided for, there is every good reason why these benefits should be extended to all employees of the postal service. It is therefore recommended that the present law be amended so as to indemnify employees of all classes in the postal service in the manner prescribed for those mentioned above.

BONDS OF POSTAL EMPLOYEES.

Attention is directed to the excessive premiums that postal employees are required to pay for fidelity bonds, and also to the inadequate protection that such bonds give to the Government. Statistics collected by the Joint Commission on Fidelity Bonds, appointed under a joint resolution of Congress in 1909 showed that during the five years ended in 1909, less than one-fourth of the premiums collected by the bonding companies from postal employees were returned to the Government in payment of losses. That commission recommended the establishment of a guaranty fund to which all Government employees would contribute and from which all losses would be paid.

Such a plan would have many advantages and apparently no disadvantages. The cost of administering the system would undoubtedly be less than the present cost of supervising the giving of bonds, investigating the solvency and sufficiency of sureties every two years, and renewing the bonds every four years. The loss to the Government through failure of the sureties to pay just claims would be eliminated. The incidental economy through the easier collection of losses and the avoidance of litigation can not be estimated accurately, but it would undoubtedly be considerable. If the premiums now paid were placed in a fund at interest and used only to pay

losses, the fund would rapidly accumulate until in a few years the interest would be more than sufficient to meet the losses.

The success with which such a guaranty may be operated is demonstrated by the experience in Canada and in the Philippine Islands.

The following statements, compiled from the records of the accountant of the Canadian Post Office Department, show the amounts collected from insured employees since the establishment of their bonding fund, together with interest allowed thereon by the postal savings bank:

AMOUNTS OF ASSESSMENTS.

(Canada.)

Years.	Postmasters.	Civil servants.	Mail contractors.	Interest.	Total.
1899 to 1906, inclusive	$87,120.49	$16,006.78	$27,258.50	$7,969.38	$138,355.15
1907	5,446.65	1,192.35	7,238.24	2,010.71	15,887.95
1908	9,187.84	2,052.11	8,608.29	3,136.53	22,984.77
1909	9,883.91	2,274.49	9,926.45	3,684.13	25,768.98
1910	10,806.75	1,749.34	8,280.31	4,228.82	25,065.22
1911	11,008.25	2,730.68	5,648.23	4,777.79	24,164.95
1912	11,609.76	3,342.93	4,649.34	5,358.51	24,960.54
1913	12,458.08	4,280.01	3,027.91	5,999.23	25,765.23
Total	157,521.73	33,628.69	74,637.27	37,165.10	302,952.79
Amount collected for and paid to the London Guaranty Co. and the Guaranty Co. of North America					29,191.72
Amount actually credited to post office guaranty fund					273,761.07

LOSSES PAID.

(Canada.)

Years.	Postmasters.	Civil servants.	Mail contractors.	Total.
1899 to 1906, inclusive	$4,851.62	$1,907.23	$20,342.51	$27,101.36
1907	779.37	1,058.87	859.18	2,697.42
1908	208.79		1,645.61	1,854.40
1909	756.83	511.57	2,858.22	4,126.62
1910	2,599.52	902.14	1,786.08	5,287.74
1911	1,584.55		2,130.64	3,715.19
1912	233.84	59.88	2,146.79	2,440.51
1913	802.84	252.29	3,443.17	4,498.30
Total	11,817.36	4,691.98	35,212.20	51,721.54

Amount actually credited to the post-office guaranty fund, including interest	$273,761.07
Amount of losses paid from fund	51,721.54
Balance to credit of the fund	222,039.53

It is to be noted that in the 14 years reported the Canadian Government has realized from assessments of insured postal employees (including interest earned by the fund) $207,429.33 more than has been paid on their account, and that during the last 6 years the interest on the guaranty fund has exceeded the losses paid.

The following is quoted from the annual report (p. 20) of the treasurer of the Philippine Islands for the fiscal year 1913:

From the establishment of civil goverment in July, 1901, up to and including December 31, 1907, the bonding of accountable officers and employees of the Government was done by contract with various American surety companies through agencies or branches established in Manila. The rate of premium paid these companies for

guaranteeing the fidelity of accountable officers and employees of the Government was as high as 1½ per cent per annum during a part of this time, and the average for the entire period was in excess of 1 per cent per annum.

Because of these high rates, and in view of the fact that efforts to secure more favorable terms were without avail, it was believed to be in the interest of economy for the Government to carry its own fidelity insurance. Act No. 1739 of the United States Philippine Commission was the result of this condition, and by it there was created a fund to provide "for assurance against losses, shortages, and defalcations by officers and employees accountable for public funds and public property." The act appropriated for this purpose the sum of $20,000,[1] and provided that there should be added to this amount the sum of $41,276.57 standing to the credit of the reimbursable appropriation from which, prior to that time, the bonding companies' premiums had been paid. The fund therefore originated with a capital of $61,276.57, and on June 30 of the fiscal year under consideration amounted to $254,531.52, showing a gain of $193,254.95 after deducting all losses paid during the five and one-half years of the fund's existence.

Based on the total amount of bonds in effect and on the annual rate charged by the official surety companies prior to the inauguration of the present system, the Government would have paid said companies during the past five and one-half years approximately $217,000, while the total losses certified and paid from the fidelity bond premium fund during that period amounted to $40,904.13.

From January 1, 1908, to December 31, 1911, the fund charged a premium of 1 per cent for the bonds executed, and on January 1, 1912, the rate was reduced to three-fourths of 1 per cent. A further reduction was made on July 1, 1912, and the rate in effect during the fiscal year under consideration has been one-half of 1 per cent.

The foregoing figures are self-explanatory, and indicate clearly the measure of economy that has resulted from the creation of this fund.

According to the report of the auditor at the close of the fiscal year ended June 30, 1913, $202,208.09 were transferred from the fidelity fund to the treasury of the Philippine Islands, leaving a balance of $52,323.43 as a working capital for the fund

In the interest of both the Government and the employees the adoption of a mutual bonding plan is therefore earnestly recommended.

PERSONNEL OF BUREAU.

The administration of the parcel-post and eight-hour laws and the careful examination accorded to the immense volume of applications and indorsements for postmasterships entailed an extraordinary burden on the employees of the bureau during the last six months of the fiscal year. During that period employees of every grade have worked under great pressure. They have cheerfully sacrificed the enjoyment of the usual leave allowances and holidays, and in addition have served many hours of overtime daily, for which no compensation is allowable under the law. It is therefore fitting and proper in this report that the employees shall receive full credit for their industry and devotion to duty that has made it possible to meet successfully a condition of affairs unprecedented in the history of this bureau.

Respectfully,

DANIEL C. ROPER,
First Assistant Postmaster General.

Hon. ALBERT S. BURLESON,
Postmaster General.

[1] The amounts stated in dollars are given in the original in pesos.

REPORT OF THE SECOND ASSISTANT POSTMASTER GENERAL.

POST OFFICE DEPARTMENT,
OFFICE SECOND ASSISTANT POSTMASTER GENERAL,
Washington, November 29, 1913.

SIR: I have the honor to submit herewith the following report for the fiscal year ended June 30, 1913:

The Second Assistant Postmaster General is charged with the authorization and management of the transportation of the domestic and foreign mails by means of railroads, electric and cable cars, screen wagons and pneumatic tubes in cities, steamboats, steamships, mail messengers, and by star routes in Alaska.

GENERAL STATEMENT OF MAIL SERVICE.

The mail service in operation on June 30, 1913, was as follows:

Service.	Number.	Aggregate length.	Annual rate of expenditure.
		Miles.	
Star routes in Alaska	20	3,873.00	$190,916.93
Steamboat routes	244	31,912.02	762,947.16
Mail-messenger routes	7,722	5,207.34	1,728,371.09
Pneumatic-tube routes	6	55.4946	943,408.20
Wagon routes (in cities)	290	1,281.19	1,760,974.86
Railroad routes	3,425	228,618.68	46,867,113.55
Railway post-office cars			4,598,917.07
Electric and cable car routes	569	7,641.12	716,195.04
Total	12,276	278,588.8446	57,568,843.90
Star routes in Alaska (emergency)			[1] 50,931.00
Steamboat routes (pound rate)			[2] 97,028.99
Railroad transportation, miscellaneous:			
Periodical mails			[2] 703,904.37
Mail weighings, etc			[2] 315,031.75
Freight on mail bags, postal cards, etc			[2] 430,704.22
Railway Mail Service (officers and clerks, including acting clerks)	18,265		[2] 22,815,795.07
Mail equipment			[2] 427,932.59
Miscellaneous expenses			[2] 186.50
Total inland service			82,410,358.39
Foreign mails:			
Aggregate cost		$3,961,232.94	
Less intermediary service to foreign countries		269,453.79	
			3,691,779.15
Total			86,102,137.54

[1] Authorization. [2] Actual expenditures. [3] Estimated actual expenditures.

Summary of all classes of domestic mail service in operation June 30, 1913.

Number of routes	12,276
Length of routes—miles	278,588.8446
Number of miles traveled per annum	506,921,399.03
Annual rate of expenditure	$82,410,358.39
Average rate of cost per mile of length	$295.81
Average rate of cost per mile traveled—cents	16.25
Average number of trips per week	17.49

Comparison with the report of June 30, 1912, shows:

		Per cent.
Increase in number of routes	68,	or 0.557
Increase in length of routes—miles	2,442.1695,	or 0.884
Increase in number of miles traveled per annum	13,536,520.27,	or 2.670
Increase in annual rate of expenditure	$3,259,594.74,	or 3.955
Increase in rate of average cost per mile of length	$9,19,	or 3.106
Increase in rate of average cost per mile traveled—cents	0.21,	or 1.292
Increase in average number of trips per week	0.32,	or 1.829

EXPENDITURES, APPROPRIATIONS, AND ESTIMATES.

The following statement shows the expenditures for the fiscal year ended June 30, 1913, as reported by the Auditor for the Post Office Department under accounts stated to September 30, 1913, the appropriations for the current fiscal year, and the estimate of amount required for the next fiscal year for each item of service:

Service, etc.	Expenditures for fiscal year ended June 30, 1913.	Appropriation for fiscal year ending June 30, 1914.	Estimate for fiscal year ending June 30, 1915.
Star service in Alaska	$237,029.80	$450,000.00	$295,000.00
Steamboat service	824,492.15	910,000.00	1,045,000.00
Mail messenger service	1,657,439.11	1,900,000.00	1,990,000.00
Pneumatic-tube service	951,556.66	962,200.00	966,800.00
Wagon service (in cities)	1,728,011.28	2,000,000.00	2,667,000.00
Mail bags, etc	281,368.08	[1]	
Labor in mail-bag repair shop	97,493.33	[1]	
Subworkshop, Chicago, Ill	2,181.95	[1]	
Mail locks and keys	11,687.00	[1]	
Labor in mail-lock repair shop	34,620.65	[1]	
Railroad transportation	47,627,690.94	51,500,000.00	56,115,000.00
Freight on mail bags, postal cards, etc	406,414.95	500,000.00	510,000.00
Railway post-office cars	4,210,917.76	5,000,000.00	5,436,000.00
Railway Mail Service	22,723,085.86	26,882,051.00	30,930,347.00
Electric and cable car service	695,388.56	847,400.00	756,000.00
Aerial mail service			50,000.00
Total inland service	81,489,378.08	90,951,651.00	100,761,147.00
Foreign mail service:			
Transportation	3,355,723.59	3,900,000.00	4,078,000.00
Assistant superintendent, New York, N. Y	2,500.00	2,500.00	2,500.00
Balance due foreign countries	469,245.77	475,000.00	681,800.00
Delegates to International Postal Union at Madrid		[2]	5,000.00
Miscellaneous expenses	186.50	1,000.00	1,000.00
Aggregate	85,317,033.94	95,330,151.00	105,529,447.00

[1] Transferred to office of Fourth Assistant Postmaster General July 1, 1913.
[2] Appropriation of $5,000, unexpended in fiscal year 1913, available for fiscal year 1914.

INCREASE IN EXPENDITURES FOR MAIL TRANSPORTATION.

The following table shows the aggregate expenditures for all items under the supervision of this office, by fiscal years, from 1888 to 1913, inclusive, the increase in amount, and the per cent of increase for each year over the preceding year:

Year.	Expenditures.	Increased expenditure over preceding year.	Per cent.	Year.	Expenditures.	Increased expenditure over preceding year.	Per cent.
1888	$30,393,209.53	$1,647,064.97	5.72	1901	$58,264,040.67	$1,889,834.18	3.35
1889	33,506,648.73	3,113,439.20	10.24	1902	61,153,775.92	2,889,735.25	4.96
1890	35,246,162.89	1,739,514.16	5.19	1903	65,321,711.74	4,167,935.82	6.81
1891	38,039,584.78	2,793,421.89	7.92	1904	69,820,732.77	4,499,021.03	6.88
1892	40,358,432.04	2,318,847.26	6.09	1905	72,862,605.41	3,041,872.64	4.35
1893	42,904,593.38	2,546,161.34	6.30	1906	76,174,945.90	3,312,340.49	4.54
1894	44,920,033.64	2,015,440.26	4.69	1907	81,090,849.02	4,915,903.12	6.45
1895	45,716,380.33	796,346.69	1.77	1908	81,381,421.80	290,572.78	.35
1896	47,894,486.56	2,178,106.23	4.76	1909	84,050,096.33	2,668,674.53	3.28
1897	49,897,992.32	2,003,505.76	4.18	1910	85,394,191.54	1,344,095.21	1.60
1898	52,319,790.86	2,421,798.54	4.85	1911	81,673,884.86	[1] 3,720,306.68	4.35
1899	53,945,796.89	1,626,006.03	3.11	1912	[2] 83,186,314.43	1,512,429.57	1.85
1900	56,374,206.49	2,428,409.60	4.50	1913	[2] 85,317,033.94	2,130,719.51	2.56

[1] Decrease; star service, except Alaska, transferred to office of Fourth Assistant Postmaster General.
[2] Under accounts stated to Sept. 30, 1913.

DIVISION OF RAILWAY ADJUSTMENTS.

RAILROAD TRANSPORTATION.

Service and expenditure.

Number of routes		3,425
Length of routes	miles	228,618.68
Annual travel	do	471,559,089.09
Annual rate of expenditure		$46,867,113.55
Average rate of cost per mile of length		$205.00
Average rate of cost per mile traveled	cents	9.93
Average number of trips per week		19.83

Comparison with the previous year shows:

		Per cent.
Increase in number of routes		16, or 0.469
Increase in length of routes	miles	2,547.66, or 1.126
Increase in annual travel	do	12,910,465.32, or 2.814
Increase in annual rate of expenditure		$530,819.69, or 1.145
Increase in rate of cost per mile of length		$0.04, or 0.019
Decrease in average rate of cost per mile traveled, cents		0.17, or 1.683
Increase in average number of trips per week		0.32, or 1.640

There was no unadjusted service on June 30, 1913, with the exception of three small routes. The appropriation for the fiscal year of 1913 was $47,646,000, which, with $105,500 provided by the appropriation act of March 4, 1913, for the deficiency in the appropriation for 1913, made $47,751,500 available for this service for the fiscal year of 1913. Of this sum the auditor reports the amount expended under accounts stated to September 30, 1913, as $47,627,690.94, leaving an unexpended balance of $123,809.06, out of which unsettled accounts must be paid.

The appropriation for the fiscal year 1914 is $51,500,000.

The annual rate of expenditure was—

June 30, 1913	$46,867,113.55
July 1, 1913	[1] 50,662,986.77
Sept. 30, 1913	[1] 50,732,518.64

The amount estimated as necessary for this service for the fiscal year ending June 30, 1915, is $56,115,000, being $4,615,000, or 8.96 per cent increase over the appropriation for the current year.

Quadrennial readjustment.—During the fiscal year the mails were weighed on the railroad routes in the first section, embracing the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and West Virginia. The annual rate of expenditure for railroad transportation in this section on June 30, 1913, was $8,854,763.02. The mails on all the routes covered by this readjustment have been weighed and the average daily weights computed, with the exception of 23 delayed for further information. The increase in the annual rate of compensation on the routes readjusted is found to be $2,140,708.78, or 24.44 per cent. Estimating the increase for the unadjusted service at the same rate makes the total increase in the annual rate $2,168,774.23.

The increase in pay resulting from the last preceding readjustment in this section in 1909 was 5.08 per cent. However, this comparison is with compensation adjusted under the old divisor. The readjust-

[1] Includes annual rate of expenditure of previous adjustment on all unadjusted routes.

ment just completed is the second readjustment in this section under the application of the Postmaster General's order of June 7, 1907, No. 412, requiring the use of the whole number of days in the weighing period as a divisor in obtaining the average daily weight, and since the withdrawal of empty equipment and supplies from the mails, and the increase in annual rate under this readjustment is $2,168,774.23, as stated above.

For information as to the several routes on which the mails were weighed and the pay adjusted from July 1, 1913, reference is made to Table B.

Desired authority for substitution of weights of mails.—During the weighing period in the first contract section disastrous floods occurred in the Ohio River Valley and contiguous territory, commencing about March 25, 1913, resulting in serious interruption of service on a number of railroad routes for several weeks. Business generally was practically at a standstill in the affected territory for a considerable time. These causes reduced the weights of mails carried on the routes referred to considerably below the normal. As compensation for the four-year term is based on the average daily weights of mails ascertained by the weighing, it would appear equitable to make an allowance for the weights that would be taken under normal conditions. Similar conditions which arose during the weighing in the second contract section in 1912 were met by special legislation. The department is without authority to make substitutions in every such case, and legislation is desired to enable it to substitute estimated weights for the part of the weighing period when weights are not normal or when none are taken as the result of flood or otherwise, such estimates to be based on the average weights for the period during which the weights are normal.

Readjustment of compensation authorized by Congress on account of the establishment of the parcel post.—The act of March 4, 1913, making appropriations for the service of the Post Office Department for the fiscal year ending June 30, 1914, contains the following provision:

> That on account of the increased weight of mails resulting from the enactment of section eight of the act of August twenty-fourth, nineteen hundred and twelve, making appropriations for the service of the Post Office Department for the fiscal year ending June thirtieth, nineteen hundred and thirteen, the Postmaster General is authorized to add to the compensation for transportation on railroad routes on and after July first, nineteen hundred and thirteen, for the remainder of the contract terms, not exceeding five per centum thereof per annum, excepting upon routes weighed since January first, nineteen hundred and thirteen, and to be readjusted from July first, nineteen hundred and thirteen, until otherwise provided by law.

Under the authority of this provision of law certifications of the approximate increase in weight of mails due to the enactment of the parcel-post legislation on each railroad route coming within the meaning of the act have been secured from the field officers of the service. This includes all routes in the second, third, and fourth contract sections, and those located in the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut in the first contract section. The percentage of increase in weights reported have been applied to the average daily weights of mail on the routes as shown by the last adjustment and the new rate per mile per annum that would be earned by such increased daily average

weight ascertained. The ratio of increase in compensation is then computed, which ratio, not exceeding 5 per cent, is applied to the total compensation paid on June 30, 1913, on the routes, except in New England, where it is applied to the compensation as readjusted from July 1, 1913, based on the results of the weighing from September 4 to December 17, 1912, and orders issued making allowances of the additional compensation so ascertained. On routes upon which the present compensation is at the rate of $42.75 per mile and the reported increase in weights does not warrant an increase in the rate per mile of compensation above $42.75, no increase has been allowed.

The adjustments made under this provision under orders issued to November 29, 1913, have added to the annual rate of compensation for railroad service on July 1, 1913, the sum of $1,651,629.87. The estimated amount of further increase on 35 routes unadjusted is $35,730.32, making the total estimated increase on account of this readjustment $1,687,360.19.

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Transportation of certain periodical mail matter by freight.—During the fiscal year the plan of transporting certain periodical mail matter in fast freight trains, which was placed in operation September 1, 1911, was continued, and from July 1, 1912, it was extended so as to include shipments between Washington, D. C., and Atlanta, Ga.; Cincinnati, Ohio, and Atlanta, Ga.; and Cincinnati, Ohio, and Chattanooga, Tenn. Congress provided by the appropriation act of August 24, 1912, that the department shall not extend or enlarge the policy of sending second-class matter by freight trains.

The method by which adjustments are made and compensation paid for this character of transportation was fully explained in the last annual report. All accounts for the year have been settled, and a tabulation of the business shows that 5,045 carloads of periodical mail matter were transported in fast freight trains during the year, carrying 140,216,437 pounds. The cost of the freight transportation, with cartage and incidental charges, was $703,904.37. Had this mail been continued in the regular mail trains the cost of its transportation would have been $2,194,918.22. The saving to the Government by reason of the shipments by freight for the year was therefore $1,491,013.85.

This method of transportation has generally been satisfactory to the publishers of the periodicals so carried, as in most cases it has been practicable to overcome the slower movement in the freight trains by advancing the date of delivery to the post office at the point of origin. The publishers of some of the periodicals which have been handled in the fast freight trains have made objection, claiming that they contain matter which is of a news nature and that they are unable to make delivery to the post office sufficiently in advance to overcome the difference in transit time, and have requested that their periodicals be restored to the regular mail trains. On account of the fact that adjustments of compensation on the routes over which the periodicals would be transported if restored to the regular mail trains are based on the weights of mails carried, exclusive of those transported in the fast freight trains, the department has not considered it practicable to

restore such periodicals to the regular mail trains without reweighing the mails and making readjustments of compensation on the routes involved. The question as to the authority of the department to weigh such periodicals alone and readjust for their weights in case of their return to the regular mail trains during the contract term was submitted to the Comptroller of the Treasury and decided in the affirmative. Accordingly, consideration has been given to these cases, and where the merits warrant it arrangements are being made to transfer such publications from the fâst freight to the regular mail trains, weigh them for the regular statutory period, and make readjustments of compensation on the routes affected.

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INCREASE IN ANNUAL RATE OF EXPENDITURE.

The table following indicates the increase or decrease, by years, in the annual rate of expenditure for the transportation of the mail by railroad:

Annual rate of expenditure for railroad transportation from 1879 to 1913, inclusive.

Fiscal year June 30—	Annual rate of expenditure.	Increase.	Per cent.	Fiscal year June 30—	Annual rate of expenditure.	Increase.	Per cent.
1879	$8,463,197.00			1897	$30,171,542.69	$1,229,662.22	4.24
1880	9,237,945.00	$774,748.00	9.15	1898	30,786,375.89	614,833.20	2.03
1881	10,249,261.00	1,011,316.00	10.94	1899	31,942,150.88	1,155,774.99	3.75
1882	11,297,333.00	1,084,072.00	10.57	1900	33,424,982.15	1,482,831.27	4.64
1883	12,288,799.00	991,466.00	8.77	1901	33,881,390.24	456,408.09	1.36
1884	13,273,606.00	984,807.00	8.00	1902	35,049.211.22	1,167,820.98	3.44
1885	14,758,495.00	1,484,889.00	11.18	1903	36,607,524.80	1,558,313.58	4.44
1886	15,520,191.00	761,696.00	5.16	1904	39,177,376.52	2,569,851.72	7.02
1887	16,174,691.22	654,500.22	4.21	1905	39,833,070.75	655,694.23	1.67
1888	17,528,599.80	1,353,908.58	8.37	1906	41,610,785.62	1,777,714.87	4.46
1889	19,441,095.78	1,912,495.98	10.91	1907	45,118,872.34	3,508,086.72	8.43
1890	20,869,231.55	1,428,135.77	7.34	1908	44,722,985.47	[1] 395,886.57	[1].87
1891	22,398,868.66	1,529,637.11	7.32	1909	44,885,395.29	162,409.82	.36
1892	24,196,329.71	1,797,461.05	8.02	1910	44,521,603.27	[1] 363,792.02	[1].81
1893	25,716,605.85	1,520,276.14	6.28	1911	46,172,472.93	1,650,869.66	3.70
1894	27,153,091.16	1,436,485.31	5.58	1912	46,336,293.86	163,820.93	.35
1895	27,961,931.78	808,840.62	2.97	1913	46,867,113.55	530,819.69	1.14
1896	28,941,880.47	979,948.69	3.50				

[1] Decrease.

Annual rate of expenditure for railway post-office cars from 1879 to 1913, inclusive.

Fiscal year June 30—	Annual rate of expenditure.	Increase.	Per cent.	Fiscal year June 30—	Annual rate of expenditure.	Increase.	Per cent.
1879	$1,104,392.00			1897	$3,704,978.50	$241,061.80	6.95
1880	1,261,041.00	$156,649.00	14.18	1898	3,917,471.67	212,493.17	5.73
1881	1,364,107.00	103,066.00	8.17	1899	4,175,724.86	258,253.19	6.59
1882	1,455,851.00	91,744.00	6.73	1900	4,368,999.59	193,274.73	4.62
1883	1,599,001.00	143,150.00	9.83	1901	4,638,234.03	269,234.44	6.16
1884	1,738,997.00	139,996.00	8.76	1902	4,904,396.73	266,162.70	5.73
1885	1,869,488.00	130,491.00	7.50	1903	5,279,323.79	374,927.06	7.64
1886	1,816,321.00	[1] 53,167.00	[1]2.84	1904	5,518,233.84	238,910.05	4.52
1887	1,881,580.50	65,259.50	3.59	1905	5,743,444.41	225,210.57	4.08
1888	1,996,359.35	114,778.85	6.10	1906	5,870,251.94	126,807.53	2.20
1889	2,198,517.55	202,158.20	10.12	1907	5,889,238.98	18,987.04	.32
1890	2,526,000.11	327,482.56	14.89	1908	4,681,777.58	[1] 1,207,461.40	[1]20.50
1891	2,784,845.16	258,845.05	10.24	1909	4,721,044.87	39,267.29	.83
1892	2,930,199.40	145,354.24	5.22	1910	4,780,614.19	59,569.32	1.26
1893	3,193,589.45	263,390.65	8.98	1911	4,737,788.75	[1] 42,825.44	[1].89
1894	3,205,098.85	11,509.40	.36	1912	4,367,029.16	[1] 370,759.59	[1]7.83
1895	3,243,410.80	38,311.95	1.19	1913	4,598,917.07	231,887.91	5.30
1896	3,463,916.70	220,505.90	6.79				

[1] Decrease.

Annual rate of expenditure for railroad transportation and railway post-office cars combined, 1879 to 1913, inclusive.

Fiscal year June 30—	Annual rate of expenditure.	Increase.	Per cent.	Fiscal year June 30—	Annual rate of expenditure.	Increase.	Per cent.
1879	$9,567,589.00			1897	$33,876,521.19	$1,470,724.02	4.53
1880	10,498,986.00	$931,397.00	9.73	1898	34,703,847.56	827,326.37	2.44
1881	11,613,368.00	1,114,382.00	10.61	1899	36,117,875.74	1,414,028.18	4.08
1882	12,753,184.00	1,139,816.00	9.81	1900	37,793,981.74	1,676,106.00	4.64
1883	13,887,800.00	1,134,616.00	8.89	1901	38,519,624.27	725,642.53	1.92
1884	15,012,603.00	1,124,803.00	8.09	1902	39,953,607.95	1,433,983.68	3.72
1885	16,627,983.00	1,615,380.00	10.76	1903	41,886,848.59	1,933,240.64	4.84
1886	17,336,512.00	708,529.00	4.26	1904	44,695,610.36	2,808,761.77	6.70
1887	18,056,271.72	719,759.72	4.15	1905	45,576,515.16	880,904.80	1.97
1888	19,524,959.15	1,468,687.43	8.13	1906	47,481,037.56	1,904,522.40	4.17
1889	21,639,613.33	2,114,654.18	10.83	1907	51,008,111.32	3,527,073.76	7.42
1890	23,395,231.66	1,755,618.33	8.11	1908	49,404,763.05	[1] 1,603,348.27	3.24
1891	25,183,713.82	1,788,482.16	7.64	1909	49,606,440.16	201,677.11	.41
1892	27,126,529.11	1,942,815.29	7.71	1910	49,302,217.46	[1] 304,222.70	[1] .61
1893	28,910,195.30	1,783,666.19	6.57	1911	50,910,261.68	1,608,044.22	3.26
1894	30,358,190.01	1,447,994.71	5.00	1912	50,703,323.02	[1] 206,938.66	[1] .40
1895	31,205,342.58	847,152.57	2.79	1913	51,466,030.62	762,707.60	1.50
1896	32,405,797.17	1,200,454.59	3.84				

[1] Decrease.

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FREIGHT ON MAIL BAGS, POSTAL CARDS, ETC.

The act making appropriations for the service of the Post Office Department for the fiscal year ended June 30, 1913, contains the following provision:

For pay of freight or expressage on postal cards, stamped envelopes, newspaper wrappers, and empty mail bags, $648,000, of which the sum of $123,200 shall be available for deficiency for the fiscal year 1912.

Of the sum of $123,200 made available for deficiency for the fiscal year 1912, $37,093.37 was expended to September 30, 1913, leaving the sum of $611,106.63 available for the fiscal year 1913.

Under the appropriations for the fiscal year 1913 the following payments have been authorized under orders issued to September 30, 1913:

On empty mail bags	$373,014.92
On postal cards	26,950.60
On stamped envelopes	28,153.85
On newspaper wrappers	2,584.85
Total	430,704.22

The estimated unexpended balance for 1913 will be $73,278.68.

The appropriation available for the fiscal year 1914 is $500,000.

The amount estimated as necessary for the fiscal year ending June 30, 1915, is $510,000, being $10,000, or 2 per cent increase over the appropriation for the fiscal year 1914.

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JOINT COMMITTEE ON POSTAGE ON SECOND-CLASS MAIL MATTER AND COMPENSATION FOR THE TRANSPORTATION OF MAIL.

The act of August 24, 1912, making appropriations for the service of the Post Office Department for the fiscal year ending June 30, 1913, provides as follows:

Provided, That a joint committee shall be appointed, composed of three members of the Senate Committee on Post Offices and Post Roads and three members

of the House Committee on the Post Office and Post Roads, to be designated by the respective chairmen, to make inquiry into the subject of postage on second-class mail matter and compensation for the transportation of mail and to report at the earliest practicable date, and for this purpose they are authorized by subcommittee or otherwise to sit during the sessions or recess of Congress, at such times and places as they may deem advisable, to send for persons and papers, to administer oaths, to summons and compel the attendance of witnesses, and to employ such clerical, expert, and stenographic assistance as shall be necessary; and to pay the necessary expenses of such inquiry there is hereby appropriated out of any money in the Treasury not otherwise appropriated the sum of $25,000 to be paid out upon the audit and order of the chairman or acting chairman of said committee. From and after the passage of this act the Post Office Department shall not extend or enlarge its present policy of sending second-class matter by freight trains.

The personnel of the committee was continued by the act of March 4, 1913, which also provided as follows:

And provided further, That the joint committee to make inquiry into the subject of postage on second-class mail matter and compensation for the transportation of mail provided for by the act of August twenty-fourth, nineteen hundred and twelve, shall make an inquiry into the question of the transportation of second-class mail matter in fast freight trains and the manner of handling incident thereto, and report upon the same and the best method of effecting its discontinuance if such be found advisable.

The officers of the department in charge of transportation have appeared before the committee at its request and submitted such information bearing upon the subject of railroad mail transportation as was in their possession. Representatives of the railroad companies have also been given extended hearings. The law requires a report to be made by the committee on or before March 4, 1914.

DIVISION OF MISCELLANEOUS TRANSPORTATION.

ELECTRIC AND CABLE CAR SERVICE.

Service and expenditure.

Number of routes		569
Length of routes	miles	7,641.12
Annual travel	do	12,369,969.40
Annual rate of expenditure		$716,195.04
Average rate of cost per mile of length		$93.72
Average rate of cost per mile traveled	cents	5.79
Average number of trips per week		15.56

Comparison with the previous year shows:

		Per cent.
Increase in number of routes		12, or 2.154
Increase in length of routes	miles	168.22, or 2.251
Increase in annual travel	do	130,331.36, or 1.065
Increase in annual rate of expenditure		$29,639.27, or 4.317
Increase in average rate of cost per mile of length		$1.85, or 2.013
Increase in average rate of cost per mile traveled	cents	0.18, or 3.208
Decrease in average number of trips per week		0.19, or 1.206

The appropriation for the fiscal year was $728,000; the amount expended, as reported by the auditor to September 30, 1913, was $695,388.56, leaving a balance of $32,611.44, out of which unsettled accounts must be paid.

The appropriation for the fiscal year 1914 is $847,400.

The annual rate of expenditure was:

July 1, 1913	$722,172.13
Sept. 30, 1913	720,056.83

The sum estimated as necessary for the fiscal year ending June 30, 1915, is $756,000, being $91,400, or 10.78 per cent, less than the appropriation for the previous year.

Electric-car rates.—The annual rate of expenditure for electric and cable car service authorized at the various rates provided by law was on June 30, 1913, as follows:

At 3 cents a mile	$204,781.35
At 4 cents a mile	30,039.00
Under special provision	6,704.21
At railroad rates	48,583.07
At schedule rates other than 3 and 4 cents a mile	38,859.72
At apartment and independent car regular rates	43,206.30
At apartment and independent car maximum rates	337,692.02
At special-agreement rates less than regular rates	6,329.37
	716,195.04

The estimates for the next fiscal year include the existing special provisions regarding rates that may be paid.

Authority for substituted motor-wagon service.—The appropriation act for the fiscal year of 1914 continued the provision in connection with the items for electric and cable cars authorizing the expenditure of not exceeding $100,000 of the appropriation for regulation screen or motor wagon service, which may be substituted in lieu of electric and cable car service. This could not otherwise be done on account of the fact that the appropriation for regulation screen-wagon service is generally no more than sufficient to care for existing contract obligations and increases in service which are foreseen. It has not been found necessary to make use of this authority, but it is a valuable alternative to enable provision for service in cases where the demands of electric car companies in the performance of the service in the large cities can not be met, and it should therefore be continued.

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PNEUMATIC-TUBE SERVICE.

The statement following shows the pneumatic-tube service under contract and that part of it in operation June 30, 1913:

Pneumatic-tube service under contract and in operation June 30, 1913, as shown by orders issued to June 30, 1913.

States.	Route No.	City.	Contractor.	Total service under contract.		Service in operation June 30, 1913.	
				Length.	Annual pay.	Length.	Annual pay.
				Miles.		*Miles.*	
Massachusetts	504003	Boston	Boston Pneumatic Transit Co.	6.774	$115,158.00	6.774	$115,158.00
New York	507003	Brooklyn	New York Pneumatic Service Co.	1.35	22,950.00	1.35	22,950.00
Do	507011	New York	....do....	27.7221	471,275.70	25.781	438,277.00
Pennsylvania	510006	Philadelphia	Pneumatic Transit Co.	10.029	170,493.00	9.9999	169,998.30
Illinois	535004	Chicago	Chicago Postal Pneumatic Tube Co.	17.966	305,422.00	9.6017	163,228.90
Missouri	545002	St. Louis	St. Louis Pneumatic Tube Co.	3.47	54,821.15	1.988	33,796.00
				67.3111	1,140,119.85	55.4946	943,408.20

The appropriation for the fiscal year was $987,400; the sum reported by the auditor as expended upon accounts stated to September 30, 1913, was $951,556.66, leaving an unexpended balance of $35,843.34, out of which unsettled accounts must be paid. The unexpended balance is due to the estimated cost of connecting Station S with the tube line, making tube connection between Times Square Station and Pennsylvania Terminal Line, at New York, N. Y., relocation of Kinzie Street Station, Chicago, Ill., and the estimated cost of the installation of tube service between Central Union depot and the post office at Cincinnati, Ohio., none of which service was authorized during the fiscal year.

The appropriation for the fiscal year 1914 is $962,200.

The annual rate of expenditure was—

July 1, 1913	$943,408.20
September 30, 1913	950,762.40

The sum estimated as necessary for the fiscal year ending June 30, 1915, is $966,800, being $4,600, or 0.478 per cent, more than the appropriation for the current fiscal year.

Changes in the service were made during the fiscal year as follows:

Pneumatic-tube lines accepted during fiscal year ended June 30, 1913.

Route No.	City and State.	Length.	Annual pay.
	NEW YORK, N. Y.		
507011	Readjustment of distance in Center Street account of subway construction.	*Miles.* 0.0121	$205.70
	ST. LOUIS, MO.		
545002	Embracing new general post office	0.0415	705.50

There was a decrease in tube lines at St. Louis, incident to omitting Annex Station of that post office at the time the new post-office building was connected, of 0.0588 of a mile. The increase shown above is the net result of the changes.

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STEAMBOAT OR OTHER POWER-BOAT SERVICE.

Number of routes	244
Length of routes—miles	31,912.02
Annual travel—do	5,385,729.89
Annual rate of expenditure	$762,947.16
Average rate of cost per mile of length	$23.90
Average rate of cost per mile traveled—cents	14.16
Average number of trips per week	1.62

Comparison with the report of the previous year shows:

		Per cent.
Increase in number of routes	7,	or 2.953
Increase in length of routes—miles	36.45,	or 0.114
Increase in annual travel—do	177,905.74,	or 3.416
Increase in annual rate of expenditure	$10,337.10,	or 1.373
Increase in average rate of cost per mile of length—cents	0.29,	or 1.228
Decrease in average rate of cost per mile traveled—do	0.29,	or 2.007
Increase in average number of trips per week	0.05,	or 3.184

The appropriation for the fiscal year was $853,700; the sum expended as reported by the auditor on accounts stated to September 30, 1913, was $824,492.15, leaving an unexpended balance of $29,207.85, out of which unsettled accounts must be paid.

The contracts for steamboat or other power-boat service in the first contract section expired on June 30, 1913, and during the past year new contracts have been entered into for a term of four years from July 1, 1913. The annual rate of expenditure on July 1, 1913, under the new contracts was $185,260.39, an increase of $32,782.80, or 21.70 per cent, over the rate under the contracts in force June 30, 1913.

The general advertisement now pending includes the steamboat or other power-boat service in the fourth contract section. On September 30, 1913, this service embraced 93 routes, with an aggregate length of 23,960.84 miles and an annual travel of 2,634,255.06 miles, with an annual rate of expenditure of $428,045.22, or 16.24 cents per mile of annual travel. The new advertisement embraces 98 routes, with an aggregate length of 23,902.44 miles and an annual travel of 2,625,894.10 miles, a decrease of 8,360.96 miles.

The appropriation for the fiscal year 1914 is $910,000.

The annual rate of expenditure was—

July 1, 1913	[1] $801,710.96
Sept. 30, 1913	[1] 802,457.67

The amount estimated as necessary for the fiscal year ending June 30, 1915, is $1,045,000, being $135,000, or 14.83 per cent, more than the appropriation for the current fiscal year.

MAIL MESSENGER SERVICE.

Number of routes	7,722
Length of routes—miles	5,207.34
Annual travel—do	12,047,360.88
Annual rate of expenditure	$1,728,371.09
Average rate of cost per mile of length	$331.91
Average rate of cost per mile traveled—cents	14.34
Average number of trips per week	22.24

Comparison with the report of the previous year shows:

	Per cent.
Increase in number of routes	28 or 0.363
Increase in length of routes—miles	24.17 or 0.466
Increase in annual travel—do	128,230.14 or 1.075
Increase in annual rate of expenditure	$108,219.74 or 6.679
Increase in average rate of cost per mile of length	$19.33 or 6.184
Increase in average rate of cost per mile traveled—cents	0.75 or 5.518
Decrease in average number of trips per week	0.13 or 0.588

The appropriation for the last fiscal year was $1,681,900; the sum expended as reported by the auditor on accounts stated to September 30, 1913, was $1,657,439.11, leaving a balance of $24,460.89, out of which unsettled accounts must be paid.

The appropriation for the fiscal year 1914 is $1,900,000.

The annual rate of expenditure was—

July 1, 1913	$1,730,526.95
Sept. 30, 1913	1,771,998.59

[1] Does not include the annual expenditure on routes where the mails were carried at a certain rate per pound, for which service $97,028.99 was expended during the fiscal year of 1913.

The amount estimated as necessary for the fiscal year ending June 30, 1915, is $1,990,000, being $90,000, or 4.73 per cent, more than the appropriation for the current fiscal year.

STAR SERVICE IN ALASKA.

Number of routes	20
Length of routes—miles	3,873
Annual travel—do	206,491
Annual rate of expenditure	$190,916.93
Average rate of cost per mile of length	$49.29
Average rate of cost per mile traveled—cents	92.45
Average number of trips per week	.51

Comparison with the service as shown in the report for the previous fiscal years shows:

	Per cent.
Decrease in number of routes	2 or 9.090
Decrease in length of routes—miles	375 or 8.827
Decrease in annual travel—do	8,316 or 3.871
Decrease in annual rate of expenditure	$5,980 or 3.037
Increase in average rate of cost per mile of length	$2.94 or 6.343
Increase in average rate of cost per mile traveled—cents	1.45 or 1.593
Increase in average number of trips per week	0.03 or 6.250

The appropriation for the fiscal year was $250,000.

The amount expended for this service during the fiscal year 1913, as reported by the auditor to September 30, 1913, was $237,029.80, leaving an unexpended balance of $12,970.20, out of which unsettled accounts must be paid.

The appropriation for the fiscal year 1914 is $450,000.

The annual rate of expenditure was—

July 1, 1913	[1] $190,916.93
Sept. 30, 1913	[1] 190,916.93

The amount estimated as necessary for the fiscal year ending June 30, 1915, is $295,000, being $155,000, or 34.44 per cent, less than the appropriation for the current fiscal year. This results from the fact that it will not be necessary to expend the amount for the transportation of parcel-post matter in Alaska which was estimated for the year 1914.

Special-office service in Alaska.—The amount expended for service of this class in Alaska during the year ended June 30, 1913, was $61.89; during the year ended June 30, 1912, it was $67.31.

The number of special-office routes on June 30, 1913, was 35, with an aggregate length of 2,499 miles and an annual travel (estimated on the basis of one round trip every four weeks) of 63,674 miles.

Comparison with the previous year shows:

	Per cent.
Increase in number of routes	4, or 12.903
Decrease in length of routes—miles	220, or 8.242
Decrease in annual travel—do	5,720, or 8.242
Decrease in annual rate of expenditure	$5.42, or 8.052
Average rate of cost per mile of length	No change.
Average number of trips per week	No change.

[1] Does not include the annual expenditure for emergency service in Alaska, for which service during the fiscal year of 1913, authority was given for the expenditure of $50,931.

Compensation for this service is limited by law. The Postmaster General may allow an amount not exceeding two-thirds of the salary paid to the postmaster at such special office. Special-office service is regarded as a temporary arrangement for the supply of offices not on or near established mail routes.

Expenditures for this service are chargeable to the appropriation for star service in Alaska.

AEROPLANE MAIL SERVICE.

During the fiscal year the department has permitted further experimental aeroplane mail service. There have been 20 orders issued permitting the mail to be carried between certain points by aeroplanes. Such service was merely temporary and was not intended to be permanent. In each instance where the mail has been carried the service has been performed by a sworn carrier and without cost to the department. Such service was authorized in 13 different States.

Reports received of the performance of the service by aeroplanes under the various orders issued permitting such service indicate that in many instances service was performed in a reasonably satisfactory manner. An estimate has been submitted for $50,000 for the fiscal year 1915 for an experimental service.

INSPECTION.

Regular reports are required at frequent intervals from postmasters and other employees on routes over which the mails are carried in order that contracts may be enforced. Deductions are made for failures to perform service and fines imposed for delinquencies.

The following statement shows the amount of deductions and fines and remissions in the transportation services assigned to the Division of Miscellaneous Transportation:

Amount of deductions and fines from pay of postal contractors and others during the fiscal year ended June 30, 1913		$50,238.35
Amount of remissions on deductions on account of satisfactory explanations	$662.35	
Amount of remissions on fines	32.06	
		694.41
Net amount of deductions and fines under orders issued during the fiscal year ended June 30, 1913		49,543.94

The above amounts are classified as follows:

	Deductions and fines.	Remissions.	Net deductions and fines.
Electric and cable car	$7,353.48	$161.64	$7,191.84
Screen wagon	8,422.00		8,422.00
Pneumatic tube	16.00		16.00
Mail messenger	1,650.37	187.25	1,463.12
Steamboat	24,008.04	345.52	23,662.52
Alaskan star	8,788.46		8,788.46
Total	50,238.35	694.41	49,543.94

DIVISION OF FOREIGN MAILS.

COST OF SERVICE, WEIGHT OF MAILS, ETC.

The cost of the foreign-mail service during the fiscal year ended June 30, 1913, was distributed as follows:

Trans-Atlantic service		$1,657,206.95
Trans-Pacific service		376,332.10
Miscellaneous service		745,017.34
Panama Railroad service for Isthmus transit of mails of United States origin		85,472.93
Brownsville & Matamoros Bridge Co., for conveyance of mails from Brownsville to Matamoros		48.99
Sea post service		90,421.96
Steamboat transfer service, New York		77,900.00
Advertisement of July 25, 1912, for ocean mail service		460.80
Miscellaneous items, telegrams, etc		1,315.62
Sea conveyance from the United States of closed mails of foreign origin, including transit across the Isthmus of Panama		442,134.65
Debit balances paid and due to foreign countries on account of intermediary maritime and land transit of mails of United States origin		472,245.77
Expenses of United States postal agency at Shanghai		8,191.82
For this department's share in maintaining the International Bureau at Berne, Switzerland, including subscription to the Journal L'Union Postale and the Universal Dictionary of Post Offices		1,400.70
For rent to January, 1913, of office rooms for assistant superintendent of division of foreign mails, New York, N. Y.		583.31
For assistant superintendent of division of foreign mails, with headquarters at New York, N. Y.		2,500.00
Making the aggregate cost of the service		3,961,232.94
Less credit balances received and due from foreign countries on account of intermediary maritime and land transit of mails of foreign countries, and covered into the United States Treasury as postal revenues when paid	$256,779.79	
Receipts of United States postal agency at Shanghai for postage stamps sold and box rents collected and covered into the United States Treasury as postal revenues	12,674.00	
		269,453.79
Leaving the net cost of the service to the United States		3,691,779.15

The appropriation for the transportation of foreign mails for the fiscal year of 1913 was $3,748,400; for balances due foreign countries, $486,400;, and for assistant superintendent Division of Foreign Mails, New York, N. Y., $2,500.

The amounts reported by the auditor as expended from the above appropriations under accounts stated to September 30, 1913, are: For transportation, $3,355,723.59; for balances due foreign countries, $469,245.77 (the estimated amount still due is $3,000); and for assistant superintendent Division of Foreign Mails, New York, N. Y., $2,500.

The appropriations for the fiscal year of 1914 are: For transportation, $3,900,000; for balances due foreign countries, $475,000; and for assistant superintendent Division of Foreign Mails, New York, N. Y., $2,500.

The amounts estimated as necessary for the fiscal year ending June 30, 1915, are:

For transportation	$4,078,000
For balances due foreign countries	681,800
For assistant superintendent, Division of Foreign Mails, New York, N. Y.	2,500
Total	4,762,300

being $384,800, or 8.79 per cent, more than the appropriation for the fiscal year 1914. The material increase over that for the preceding year is due largely to provision for balances due foreign countries based upon the new statistics.

The weights of the mails dispatched by sea to foreign countries during the fiscal year were as follows:

	Grams.	Pounds.
Letters and post cards	1,427,362,438	3,148,135
Other articles	8,828,931,361	19,285,315
Total	10,256,293,799	22,433,450

An increase of 1,369,910 pounds, or 6.5 per cent over 1912.

Based on a count made at United States exchange post offices during seven days in October, 1912, and seven days in April, 1913, it is estimated that the number of articles exchanged with all foreign countries (both by land and by sea) during the fiscal year 1913 was 390,792,433 sent and 351,971,314 received, and that the amount collected as postage prepaid by the senders of such articles, and as deficient postage collected of addressees in this country on unpaid or short paid articles received from abroad, was $10,178,798.78, of which amount the postage collected on such articles exchanged with all countries other than Canada and Mexico is estimated to have been $6,607,507.78, an increase of 2.84 per cent, 1.94 per cent, 5.55 per cent, and 6.44 per cent, respectively, over the fiscal year 1912.

The rate of compensation allowed under the general statute for the sea conveyance of United States mails by steamers of United States register, not operated under formal contract under the ocean mail act of 1891, is not exceeding the full postage on the mails conveyed, at present at the rate of 80 cents a pound for letters and post cards and 8 cents a pound for other articles, and to steamers of foreign register 4 francs a kilogram (about 35 cents a pound) for letters and post cards and 50 centimes a kilogram (about 4½ cents a pound) for other articles, calculated on the net weights of the mails conveyed. For the conveyance of foreign closed mails the conveying steamers, whether under the United States or foreign flags, are compensated at the rate of 4 francs a kilogram for letters and post cards and 50 centimes a kilogram for other articles. The conveyance of all mails by American steamers operating under the ocean mail act of 1891 is paid for on a mileage basis, as determined by the act and depending on the speed and size of the steamers. Statement 1 of Table D, appended hereto, shows in detail the weights of the mails conveyed and the amounts paid to each steamship company, and indicates as well which steamers are of United States

and which of foreign register. Statement 2 of Table D shows the weights of the foreign closed mails forwarded from the United States in transit to other destinations by the different steamship lines and the compensation paid to each line for such conveyance. Each statement indicates, respectively, the service performed by the contract lines of American steamers and the compensation paid therefor.

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TRANSATLANTIC MAILS.

As heretofore, the mails for Great Britain and the Continent of Europe have been dispatched by the fast steamers of the several lines. In the case of two or more steamers sailing on the same day or succeeding days, mails have been assigned, as a rule, to the vessel whose previous record indicated the probable earlier delivery of the mails at destination, and when warranted by the gain in time due to sorting the mails at sea, preference has been given to sea-post steamers over nonsea-post steamers. The practice has been continued also of giving preference to steamers under contract with the department, pursuant to the provisions of the act of March 3, 1891.

During the year there have been dispatches of mails to Europe, as a rule, four days a week. Tuesdays, by steamers of the North German Lloyd: Wednesdays, by steamers of the Cunard Line; Thursdays (now Wednesdays), by steamers of the French Line; Saturdays (now Fridays), by the contract steamers of the American Line; Saturdays, by steamers of the White Star Line. In addition, dispatches have been made by steamers of the Hamburg-American Line sailing sometimes on Thursdays and sometimes on Saturdays. Sea-post service has been regularly performed on the above-mentioned steamers of the North German Lloyd, French, American, White Star, and the fast steamers of the Hamburg-American Line.

The sailing of the contract steamers of the American Line from New York on Fridays instead of on Saturdays commenced on the first Friday in April, 1913, and the change has been highly satisfactory to the department.

TRANSPACIFIC MAILS.

There was regular contract service under the act of 1891 by the Oceanic Steamship Co., from San Francisco to Sydney, via Honolulu and Pago Pago, every 28 days, commencing July 2, 1912. The only other service in American steamers on the Pacific was performed by the steamer *Minnesota* of the Great Northern Steamship Co., sailing every three or four months from Seattle to Hongkong, via Japan, and by the steamers (five in number) of the Pacific Mail Steamship Co. sailing about every 14 days from San Francisco to Hongkong, via Hawaii and Japan, with occasional calls at Manila. With the exceptions above mentioned, our mails for trans-Pacific destinations were carried in vessels of foreign register principally, as follows:

The Canadian Pacific steamers sailing every 28 days from Vancouver to Japan and China; the three Japanese lines, Nippon Yusen Kaisha, Toyo Kisen Kaisha, and the Osaka Shosen Kaisha, sailing usually twice a month from Seattle, San Francisco, and Tacoma, respectively, for Japan and China; the steamers of the Blue Funnel Line sailing once in about every 28 days from Seattle for Japan

and China; the steamers of the Union Steamship Co. sailing every 28 days from San Francisco to Australia via Tahiti and New Zealand; and the steamers of the Canadian Australian Line sailing every 28 days from Vancouver for Australia via Honolulu, the Fiji Islands, and New Zealand. Service was performed by other lines, but as a rule it was irregular and slow.

CENTRAL AND SOUTH AMERICAN MAILS.

There have been no important changes during the year in the dispatches of mails to Central and South America, dispatches from New York and New Orleans having been made about as last year. The only contract service we have is that to Venezuela by steamers of the Red D Line. All other service is performed by noncontract steamers mostly of foreign register, over which the department has no control. The dispatches are reasonably frequent, but with few exceptions the steamer sailings occur at irregular intervals and in many cases not on the dates originally scheduled.

MAILS FOR MEXICO.

During the greater part of the year mail service with Mexico was seriously interrupted on account of the insurrection in that country. The usual overland routes could not always be used, and mail was therefore diverted to the sea routes from New York on the Atlantic and ports on the Pacific. Our contract service on route 69—New York to Vera Cruz via Habana and Progreso—was of great advantage when the overland routes could not be used, mails having been dispatched at such times from New York by the steamers on that route and also via New Orleans and Key West to connect with the steamers at Habana.

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INTERNATIONAL PARCEL POST.

During the year four parcel-post conventions became effective, viz: That with Panama, August 1, 1912; that with the Dominican Republic, January 1, 1913; that with the French Colony of Guadeloupe, April 1, 1913; and that with the French Colony of Martinique, April 1, 1913. A parcel-post convention with Greece has been signed by the Postmaster General and ratified by the President, but is awaiting ratification by the Government of Greece before becoming effective.

Negotiations are in progress for the conclusion of parcel-post conventions with Argentina, Cuba, Gibraltar, Liberia, Portugal, Russia, Spain, Switzerland, and the French Colonies of French Guiana and St. Pierre and Miquelon, with prospects, in some cases at least, of favorable results.

There are now in operation parcel-post conventions with 47 countries and colonies. The following are the essential characteristics of the service:

Postage rate, uniform at 12 cents a pound.

Limit of weight, uniform at 11 pounds.

Limit of value, none, except for parcels for and from Ecuador, to which a value limit of $50 applies.

Limit of size, uniform at 3 feet 6 inches greatest length and 6 feet greatest length and girth combined, except Mexico and Colombia—2 feet greatest length and 4 feet greatest girth.

The weight of the parcel-post mail dispatched from the United States during the year was 2,831,512 pounds, an increase of 561,297 pounds, or 24.72 per cent. The number of parcels dispatched was 869,552, of an average weight of 3.26 pounds, an increase in number of 150,724 parcels, or 20.97 per cent, and an increase in average weight of parcel of 3.49 per cent. The weight of the parcel-post mails received was 2,399.317 pounds, an increase of 431,538 pounds, or 21.93 per cent. The number of parcels received was 468,759, of an average weight of 5.12 pounds, an increase in number of 62,303 parcels, or 15.33 per cent, and an increase in average weight of parcel of 5.79 per cent.

The fact that the percentages of increase in the number and total weight are greater as regards the parcels sent than as regards those received is gratifying and indicates a steady and continuous growth of the service as an advantageous means of increasing the country's exports. It shows further that the growth of the service as a whole is more largely due to an increase in exports than to an increase in imports.

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REDUCED POSTAGE RATE FOR CERTAIN LETTERS.

Our agreements with Great Britain and Germany for a 2-cent letter rate show the following results for the year, based on a seven days' count in November, 1912, and a seven days' count in April, 1913:

Letters dispatched to Great Britain and Ireland:

Total number of letters for 1 year	27,492,660
Total postage prepaid thereon, at 2-cent rate	$608,602.02
Total postage that would have been collected thereon, calculated at Postal Union rate	$1,454,702.08
Additional revenue that would have accrued if paid at Postal Union rate	$846,100.06

Letters dispatched to Germany by sea direct:

Total number of letters for 1 year, at 2-cent rate	4,369,534
Total postage prepaid thereon	$94,206.32
Total postage that would have been collected thereon, calculated at Postal Union rate	$228,673.38
Additional revenue that would have accrued if paid at Postal Union rate	$134,467.06
Total number of letters for 1 year, at Postal Union rate	5,241,574
Total number of letters for 1 year, at both rates	9,611,108
Percentage of 2-cent-rate letters of total number sent (per cent)	45.46
Total additional revenue that would have accrued on letters to the United Kingdom and to Germany at Postal Union rate, assuming that the same number of letters would have been dispatched	$980,567.12

The percentage of increase in the number of letters dispatched during the fiscal year ended June 30, 1913, over the fiscal year of 1912, according to counts taken in May, 1912, November, 1912, and April, 1913, are as follows:

	Per cent.
Letters dispatched to Great Britain and Ireland, increased	6.3
Letters dispatched to Germany:	
2-cent rate, increased	9.7
Postal Union rate, decreased	1.86
For both rates, increased	3.09

UNIVERSAL POSTAL CONGRESS.

The Universal Postal Congress, mentioned in the last annual report, which was to be convened at Madrid in the spring of 1914, has been again postponed until the fall of 1914 at the request of the postal administration of Spain. As this will fall within the fiscal year of 1915 and appropriation for delegates to the convention was made for the years 1913 and 1914, it will be necessary to secure an appropriation for this purpose for 1915. An estimate has therefore been submitted in the usual course for an appropriation of $5,000 for the expenses of two delegates to the Universal Postal Congress at Madrid, to be appointed by the Postmaster General, from the Post Office Department.

INTERNATIONAL TRANSIT STATISTICS.

Pursuant to the requirements of the Universal Postal Convention, transit statistics relative to international mails were taken at United States exchange post offices during the first 28 days of May, 1913. Similar statistics were required to be taken throughout the Postal Union. These statistics will form the basis of the annual intermediary transit charges for the years 1914 to 1919, inclusive, payable by each of the various countries to other countries on account of mails passing over their territory. The statistics taken during the first 28 days of November, 1907, formed the basis of similar charges for the years 1908 to 1913, inclusive. The results of the statistics taken in May, 1913, are not yet known, but considering the steady increase from year to year in the volume of the mails concerned, it is thought that the amount due from the United States as debit balances to other countries will be at least 40 per cent greater than the amount due on account of similar balances under the statistics of November, 1907, and the estimate for this item in the post-office appropriation bill has been made accordingly.

IMPROVEMENTS IN THE SERVICE.

Inauguration of international sea post service (Aug. 8, 1912) on the fast steamers of the French Line plying between New York and Havre.

Inauguration of parcel-post service with Panama (Aug. 1, 1912); with the Dominican Republic (Jan. 1, 1913); and with the French Colonies of Guadeloupe and Martinique (Apr. 1, 1913).

Conclusion of a parcel-post convention with Greece.

A more extended use of the route via New Orleans for the dispatch of mails for Central and South America.

Change from Saturday to Friday of the sailing date of the contract steamers of the American Line on the route from New York to Europe, thereby giving us an additional mail to Europe every week, as dispatches are made on Saturdays by other steamers.

Dispatch via the Pacific route in addition to the route via New York and Europe of mails for the State of Western Australia previously dispatched exclusively via New York and Europe.

DIVISION OF RAILWAY MAIL SERVICE.

OPERATION.

Appropriations, expenditures, and estimates.—The appropriations for the fiscal year and expenditures as reported by the Auditor for the Post Office Department under accounts stated to September 30, 1913, for the Railway Mail Service, were as follows:

For salaries of officers and clerks the appropriation was $22,465,171, and the expenditures were $21,190,276.80, leaving an unexpended balance of $1,274,894.20; $37,126.21 of this balance represents the unaudited expenditures for the last quarter of the year, leaving a net balance of $1,237,767.99 after deducting from the amount appropriated the audited expenditures of $21,190,276.80 and the unaudited expenditures of $37,126.21.

A large part of the unexpended balance is the result of the inclusion in the appropriation of a greater amount to carry out the provisions of the reclassification act than was found to be necessary for the first year.

The appropriation for travel allowances was $1,340,743, and the expenditures $1,202,639.79, leaving an unexpended balance of $138,103.21; $46,061.80 of this balance represents the unaudited expenditures for the last quarter of the year, leaving a net balance of $92,041.41.

The appropriation for temporary clerk hire was $67,500, and the expenditures $46,434.60, leaving an unexpended balance of $21,065.40.

The appropriation for substitutes for clerks on vacation was $83,250, and the expenditures $65,857.29, leaving an unexpended balance of $17,392.71.

The appropriation for acting clerks in place of clerks or substitutes injured while on duty and for payment to representatives of clerks killed while on duty was $130,000 and the expenditures $108,094.97, leaving an unexpended balance of $21,905.03.

The appropriation for expenses of superintendents, etc., while actually traveling on business of the department was $60,000 and the expenditures $38,797.71, leaving an unexpended balance of $21,202.29.

The appropriation for rent, etc., was $80,000, and the expenditures $68,106.41, leaving an unexpended balance of $11,893.59.

The appropriation for per diem allowance, assistant superintendents, was $3,831, and the expenditures $2,349, leaving an unexpended balance of $1,482.

The appropriation for expenses of assistant superintendents not covered by per diem was $700, and the expenditures $529.29, leaving an unexpended balance of $170.71.

* * * * * * *

Extent of service and force employed.—On the 30th of June, 1913, there were in operation 157 full railway post-office lines, manned by 1,797 crews of 8,562 clerks (including 338 acting clerks). Of these 157 full lines, 141 had apartment-car service, manned by 1,004 crews of 1,650 clerks (including 47 acting clerks). There were also 1,366 apartment railway post-office lines, manned by 4,391 crews of 5,987 clerks (including 251 acting clerks); 17 electric-car lines, with 21 crews and 23 clerks; 49 steamboat lines, with 76 crews and 76 clerks (including 24 acting clerks); a total of 1,589 lines of all kinds, manned by 16,298 clerks, representing the working force of the lines.

In addition, there were 32 officials, 103 chief clerks, 627 transfer clerks (including 25 acting clerks) employed in handling the mails at important junction points, 643 clerks (including 36 acting clerks) detailed to clerical duty in the various offices of the service, and 562 clerks (including 84 acting clerks) employed in terminal railway post offices; an aggregate of 18,265 employees (regular and acting clerks combined) in the service, an increase of 1,190, or 6.969 per cent, more than during the previous year.

The employment of the force for the years 1912 and 1913 is shown in the following table:

Fiscal year ended June 30—	Officers.	Chief clerks.	Employed on—			Total on lines.	Employed in—			Total.
			Railroad lines.	Steamboat lines.	Electric lines.		Offices.	Transfer offices.	Terminal R.P.O.'s.	
1912	32	129	15,218	86	19	15,323	521	622	448	[1] 17,075
1913	32	103	16,199	76	23	16,298	643	627	562	[1] 18,265
Increase		[2] 26	981	[2] 10	4	975	122	[2] 5	114	1,190

[1] Including acting clerks. [2] Decrease.

Of the total number (17,075) of employees in the service on the 30th day of June, 1912, there were 16,720 regular employees and 355 acting clerks. Of the total number (18,265) of employees in the service on the 30th day of June, 1913, there were 17,460 regular employees and 805 acting clerks, an increase of 740 in the number of regular employees and an increase of 450 in the number of acting clerks, or a net increase of 1,190 in the force of regular and acting employees combined.

There was a total of 1,016 appointments and transfers to new places during the year, at an increase in the annual rate of expenditure of $905,200. In addition, railway postal clerks received increases in salaries aggregating $1,088,728.

The following table shows the miles of railroad covered by full railway post offices, apartment railway post offices, electric and cable cars, and steamboat lines upon which railway postal clerks are employed; also the miles of railroad, electric, and steamboat lines covered by closed-pouch service, and the mileage of closed-pouch service on express trains upon lines upon which there was railway post-office service on other trains during the fiscal year:

Character of service.	Length of lines.	Per cent of increase.	Annual miles of service.	Per cent of increase.
	Miles.			
Railway post office service:				
On full car lines	49,663.75	[1] 7.539	86,631,684	0.960
Apartment-car service on full car lines	5,256.13	142.674	46,985,418	[1] .642
On apartment-car lines	146,916.97	1.668	184,670,704	3.362
On electric-car lines	640.19	13.242	634,076	7.835
On steamboat lines	13,356.45	[1] 30.130	2,397,104	[1] 14.804
Total	215,833.49	[1] 1.923	321,318,986	1.954
Closed-pouch service:				
On railroads	29,620.75	2.787	35,874,714	3.185
On electric lines	6,709.11	3.612	9,091,118	[1] .632
On steamboat lines	18,555.57	45.428	2,988,626	24.835
On express trains	.....	.....	117,396,569	4.703
Total	54,885.43	14.221	165,351,027	4.366
Grand total	270,718.92	.969	486,670,013	2.761

[1] Decrease.

Equipment.—The following table shows the car equipment in operation on June 30, 1913, as compared with June 30, 1912:

	On railroad lines.							Cars on electric and cable lines.	Apartments on steamboat lines.	Grand total.
	Full cars in use.	Full cars in reserve.	Total number full cars.	Apartment cars in use.	Apartment cars in reserve.	Total number apartment cars.	Total number full and apartment cars.			
June 30, 1912	1,114	274	1,388	3,231	798	4,029	5,417	22	99	5,538
June 30, 1913	1,102	251	1,353	3,214	879	4,093	5,446	27	84	5,557
Increase	[1] 12	[1] 23	[1] 35	[1] 17	81	64	29	5	[1] 15	19

[1] Decrease.

Of the 1,102 full cars in use, 956 full cars are actually required to keep up full railway post-office lines, 67 full cars are furnished in lieu of apartment cars to keep up apartment-car lines running over full railway post-office lines, and 79 full cars are furnished in lieu of apartment cars to keep up apartment-car lines. In addition there are 251 full cars in reserve; 209 of these are in reserve on full railway post-office lines, 17 full cars in reserve in lieu of apartments on apartment-car lines running over full railway post-office lines, and 25 full cars in reserve on apartment-car lines.

Of the 3,237 apartment cars in use, 447 are actually required to keep up apartment-car lines running over full railway post-office lines and 2,790 to keep up apartment-car lines. In addition there are 883 apartment cars in reserve; 107 of these cars are in reserve on apartment-car lines running over full railway post-office lines and 776 cars (including 4 cars on electric lines) in reserve on apartment-car lines.

Of the 1,353 full railway post-office cars in use and in reserve on June 30, 1913, 596 are all-steel cars, 201 steel-underframe cars, and 556 wooden cars, an increase of 51 all-steel cars and 19 steel-underframe cars, and a decrease of 105 in the number of wooden cars.

Full cars in use and in reserve on June 30, 1913.

	Length of car in feet.																					Total.
	40	41	42	43	44	45	48	49	50	51	52	54	55	56	57	59	60	61	62	65	69	70	
Steel	40	...	...	...	...	...	...	...	...	1	...	1	...	...	1	5	405	3	1	3	...	136	59
Steel underframe	7	...	...	...	...	...	...	...	10	...	1	...	1	...	...	...	162	...	11	3	6	....	201
Wood	28	9	3	2	8	2	1	7	76	4	2	4	16	1	...	9	368	12	1	3	...	....	556
Total	75	9	3	2	8	2	1	7	86	5	3	5	17	1	1	14	935	15	13	9	6	136	1,353

Of the 556 wooden full railway post-office cars, 497 conform to the construction requirements of the department, leaving 59 wooden cars not up to these requirements. The 956 full cars in use on June 30, 1913, are actually required to keep up the service on full railway post-office

lines. There are available for this requirement 797 steel and steel underframe cars and 497 wooden cars up to the construction requirements of the department, a total of 1,294 cars, a surplus of 338. The total number of full railway post-office cars is 1,353. Deducting the 1,294 available to meet a service requirement for 956 cars leaves 59 cars not up to construction requirements and not needed for service on full railway post-office lines.

Of the 1,353 full railway post-office cars in use and in reserve on full and apartment railway post-office lines, 1,336 cars are reported as being up to sanitary requirements of the department and 17 as not being up to such requirements. The sanitary requirements are sanitary drinking-water containers, toilet facilities, and regular and thorough cleaning of the cars. The 17 cars lacking in sanitary facilities represent surplus postal equipment of the railroad companies and are not necessary to meet the actual requirements of the service.

Of the 4,120 apartment cars in use and in reserve, 354 are all-steel cars, 322 steel underframe cars, and 3,444 wooden cars, an increase of 173 all-steel cars and 101 steel underframe cars, and a decrease of 183 wooden cars.

Apartment cars in use and in reserve on June 30, 1913.

	Under 15 feet.	15 to 18 feet.	18 to 20 feet.	20 to 22½ feet.	22½ to 25 feet.	25 to 30 feet.	Over 30 feet.	Total.
Steel	44	5	.....	.....	18	182	105	354
Steel underframe	3	11	15	11	50	178	54	322
Wood	374	477	301	502	411	1,017	362	3,444
Total	421	493	316	513	479	1,377	521	4,120

Of the 3,444 wooden apartment cars, 2,297 conform to the construction requirements of the department, leaving 1,147 not up to these requirements.

To keep up the service, 3,237 apartment cars are actually required. There are available for this requirement 676 steel and steel underframe apartment cars and 2,297 wooden cars up to construction requirements of the department, a total of 2,973 cars, leaving 264 required for use not up to the construction requirements of the department.

Of the 4,120 apartment cars in use and in reserve, 3,518 are reported as being up to the sanitary requirements of the department and 602 as not being up to these requirements.

During the fiscal year 69 all-steel and 1 steel underframe full railway post-office cars have been placed in service; 8 wooden full railway post-office cars have been rebuilt and steel underframes applied; 197 all-steel, 20 steel underframe, and 6 wooden apartment cars have been placed in service; 53 wooden apartment cars have been rebuilt and steel underframes applied, and 110 wooden apartment cars have been rebuilt; 53 full railway post-office cars and 107 apartment cars not built in accordance with the specifications of the department are reported as having been withdrawn from service.

At the close of the year there were reported as being under construction 126 all-steel and 2 steel underframe full railway post-office cars; 158 all-steel, 14 steel underframe, and 5 wooden apartment cars.

* * * * * * *

Distribution.—It is estimated (computed on a basis of an average of 25.16 letters to a package and an average of 52.14 pieces to a sack) that there were 8,943,015,808 distributions and redistributions of pieces of first-class and 3,710,840,552 distributions and redistributions of pieces of second, third, and fourth class matter, a total of 12,653,856,360 distributions and redistributions of pieces, exclusive of registered matter, by railway postal clerks during the past year, an increase of 2.67 per cent over the previous year.

Of registered matter there were handled and rehandled in transit 69,867,945 packages and cases, 2,226,750 registered pouches, and 1,423,664 inner registered sacks. In addition, clerks made up and dispatched 1,233,925 registered pouches and inner registered sacks; received and opened 1,177,505 registered pouches and inner registered sacks; handled and rehandled in transit 2,238,807 registered package jackets; made up and dispatched 709,160 registered package jackets, containing 4,623,178 pieces; received and opened 612,657 registered package jackets, containing 4,109,550 pieces; handled and rehandled in transit 169,044 lead-seal sack jackets; made up and dispatched 34,069 lead-seal sack jackets containing 472,591 pieces; and received and opened 32,505 lead-seal sack jackets containing 455,900 pieces.

Of the 12,653,856,360 pieces of mail matter distributed and redistributed 12,650,827,249 pieces, or 99.976 per cent, were distributed and redistributed correctly.

Case examinations.—There were 41,469 examinations of permanent railway postal clerks.

The number of cards handled was 36,900,086, of which 99.17 per cent were handled correctly. Last year's report shows 41,346 examinations, 35,506,410 cards handled, 99.12 per cent correctly. The probationary clerks passed 978 examinations, handling 818,376 cards, 98.16 per cent correctly. Last year this class of clerks passed 1,097 examinations, handling 946,549 cards, 98.25 per cent correctly.

In addition to the above there were 5,169 examinations passed by substitutes. The number of cards handled was 4,369,664, of which 97.79 per cent were handled correctly. Last year there were 4,857 examinations and 3,856,140 cards handled, with 97.89 per cent correctly.

Casualties.—There were 277 railroad accidents during the year in which postal clerks were either killed or injured or in which mail matter was lost or damaged; 261 of these accidents resulted in 6 clerks being killed, 61 seriously injured, and 403 slightly injured. In addition there were three fatalities to railway postal clerks, as follows:

Two clerks were killed by falling out of the door of the mail car while making an exchange of mails and one died from the effects of an injury received while loading mail in the mail car.

The kind and construction of mail cars which were in these accidents is shown by the following table:

Construction of car.	Accidents.	Clerks killed.	Clerks seriously injured.	Clerks slightly injured.	Total clerks killed or injured.
Wood	162	4	41	202	247
Wood reenforced	9		2	13	15
Steel	50	[1] 1	11	115	127
Steel underframe	29	1	7	54	62
Not shown	11			19	19
Total	261	6	61	403	470

[1] This is the first case of a clerk being killed in the wreck of a modern steel car.

The change in law permitting the granting of additional leave to railway postal clerks injured in the line of duty during the period of disability, after 1 year has elapsed, for not exceeding 12 months thereafter with pay equal to 50 per cent of the clerk's salary, outlined in the last report, has resulted in much good. Heretofore it has been impossible to grant such leave to injured clerks where their leave on account of such injury has extended over a period of 1 year. During the past year leaves of absence exceeding 1 year but not exceeding 12 months additional, with pay equal to 50 per cent of the clerk's salary, have been granted to 21 railway postal clerks, aggregating a total of 2,306 days.

Catching and delivering devices.—No material progress has been made by railroad companies during the year in the installation of improved mail-exchanging devices, although they have been informed that they are expected to introduce an improved system of mail exchanging without unnecessary delay.

SEPARATION OF SECOND-CLASS MATTER BY PUBLISHERS.

The weight of paid-at-the-pound rate second-class mail received from publishers during the fiscal year was 997,547,040 pounds, an increase of 57,606,685 pounds, or 6.12 per cent increase over the previous year. Combining the paid-at-the-pound rate and free-in-county second-class mail matter received from publishers, the total amount for the year was 1,057,607,512 pounds.

At 189 of the largest post offices there were received in the mails during June, 1913, 1,728,777 sacks of second-class matter, representing 8,494 publications. Of these sacks 80.89 per cent were fully made up by the publishers and were dispatched intact, 12.96 per cent were partly made, and 6.15 per cent were mixed; that is, received without any separation by States or routes. Fully made up matter comprises sacks made up by publishers addressed to States, post offices, or routes which are dispatched intact from the office of origin without being separated or distributed in any way. Partly made up matter comprises sacks made up by publishers for States or cities which require separation or distribution in the office of origin. Mixed matter is matter deposited in the post office by publishers totally unseparated.

The statistics from the New York post office show the per cent of mixed second-class mail received from publishers as only 5.8.

A statement of the composition of fully made-up sacks received during June, 1913, at 40 post offices shows that 12.48 per cent were received made up by States and dispatched intact, 37.39 per cent were received made up for post offices, and 50.13 per cent were received made up by routes.

The distribution of second-class mail to railway post-office routes by publishers, in accordance with alphabetical schemes or lists furnished by the department, has been extended to include many additional publications. Efforts to increase the amount of mail so distributed and interest publishers in the matter have been with few exceptions successful, as publishers generally realize that the requirement is reasonable and results in expediting the delivery of their publication with greater regularity.

As stated in my report for 1912, the establishment of this system has resulted in a more regular movement of such mails and prevented to a large extent the periodical congestion of that class of matter in post offices and railway post offices.

IMPROVEMENTS.

New railway post-office service.—During the past fiscal year changes and improvements have been made on 31,423.27 miles of the service. Of this total, 8,404.72 miles represent the establishment of apartment-car service, superseding service previously provided by closed pouches forwarded upon express trains; 18,674.81 miles of apartment-car service have been superseded by full railway post-office car service; and additional apartment cars have been placed in full railway post-office lines on 4,343.74 miles.

The following table is a summary showing the changes and improvements that have been made in the several classes of service, separately described, and stating in miles the treatment provided:

	Miles.
Closed-pouch service superseded by apartment-car service	8,404.72
Apartment-car service superseded by full R. P. O. cars	18,674.81
Additional apartment cars placed in full R. P. O. lines	4,343.74
	31,423.27
Reductions:	
Apartment cars superseded by closed-pouch service	2,239.98
Full R. P. O. cars superseded by apartment cars	613.93
	2,853.91
Discontinued:	
Full R. P. O. cars 60 feet in length	202.00
Full R. P. O. cars 50 feet in length	400.67
Full R. P. O. cars 40 feet in length	2,015.82
	2,618.49
Recapitulation:	
Total changes and improvements	31,423.27
Reduction in service	2,853.91
Full postal cars discontinued	2,618.49
	5,472.40
Total net increase during period of this report	25,950.87

Railway post-office terminals.—Owing to the rapid development of the Parcel Post Service additional terminal facilities have been provided for the distribution of parcels as well as periodical matter and other mails. On June 30 there were in operation 32 terminal railway post offices, in which 562 railway postal clerks were employed. By establishing additional terminals and enlarging some that have already been installed, a saving will be made in the expenditure for railway post-office cars of approximately one and a half million dollars, which would otherwise be necessary, while the efficiency of the service will be largely increased. Without delaying the mails, from 35 to 45 per cent of the quantity heretofore distributed in railway post-office cars will be distributed in terminal railway post offices.

RECLASSIFICATION.

The law authorizing the reclassification of the salaries of railway postal clerks became effective October 1, 1912. On that date railway post-office lines, terminal railway post offices, and transfer offices were reclassified as follows: One thousand two hundred railway post-office lines, 4 terminal railway post offices, and 188 transfer offices were placed in class A; 467 railway post-office lines, 22 terminal railway post offices, and 22 transfer offices were placed in class B; and 214 railway post-office lines, 9 terminal railway post offices, and 9 transfer offices were placed in class C. In addition from October 2, 1912, to June 30, 1913, 8 railway post-office lines were placed in class A, 8 in class B, and 6 in class C; 1 transfer office was reduced from class B to class A; and 2 railway post-office lines were raised from class A to class B and 1 from class B to class C.

During the period from October 1, 1912, to June 30, 1913, 14,426 promotions of chief clerks and railway postal clerks were made, as follows: Fifty clerks of class 1, under the old classification, receiving salaries ranging from $490 to $890 per annum, were promoted to grade 1, of the new classification, at $900 per annum; 128 clerks of class 1, at $800, were promoted to grade 1, at $900 per annum; 52 clerks of class 1, at $900, were promoted to grade 2, at $1,000 per annum; 49 clerks of class 2, receiving salaries ranging from $910 to $990, were promoted to grade 2, at $1,000 per annum; 1,842 clerks of class 2, at $1,000, were promoted to grade 3, at $1,100 per annum; 5,671 clerks of class 3, at $1,100, were promoted to grade 4, at $1,200 per annum; 1 clerk of class 3, at $1,100, was promoted to grade 5, at $1,300 per annum, this being a restoration in grade under the reclassification act; 2,002 clerks of class 4b, at $1,200, were promoted to grade 5, at $1,300 per annum; 2,497 clerks of class 4a, at $1,300, were promoted to grade 6, at $1,400 per annum; 471 clerks of class 5b, at $1,400, were promoted to grade 7, at $1,500 per annum; 1,299 clerks of class 5a, at $1,500, were promoted to grade 8, at $1,600 per annum; 260 clerks of class 6, at $1,600, were promoted to grade 9, at $1,700 per annum; and 104 chief clerks were promoted from $1,800 per annum under the old law to $2,000 per annum under the reclassification act.

SUPERVISION.

Chief clerks have been required to travel over their lines at least 50 per cent of their time. A more complete understanding of all the

conditions of the service has thus been made possible, and as a result there is now a better organization of the forces and the efficiency of the service has been increased.

APPOINTMENT OF CLERKS.

In order to provide a wider field of selection to the position of railway postal clerk than that which the department now has through examinations and the establishment of eligible rolls, it is proposed to arrange for transfers of clerks in post offices of the first and second classes who have experience and who are willing to enter the Railway Mail Service. It is not intended to discontinue separate examinations for the Railway Mail Service and the selection of substitutes from the eligible list, but to supplement this list by a list of eligibles from post offices above named. Uniform examination requirements for entrance to the two branches of the service may be provided so as to allow the forces to be interchangeable. The present limitation of law upon the appointment of a railway postal clerk at a grade higher than the entrance grade restricts the choice as to clerks in post offices, as men who are receiving more than $900 in post offices will not be disposed to accept transfers. To overcome this, it is suggested that appropriate legislation be secured to permit transfers of this character at not exceeding the salary the clerk is receiving at the time of his transfer.

RELIEF MEASURES.

Leaves of absence.—Under present law railway postal clerks may be granted leave of absence with pay in case of sickness, but the substitute must be provided at the clerk's expense. Authority of law should be secured to grant railway postal clerks leaves of absence on account of sickness, not exceeding 30 days in any fiscal year, the substitute clerk in such cases to be provided at the expense of the Government.

It is also desirable that the law granting railway postal clerks who run 6 days or more a week throughout the year 15 days annual leave be modified so as to grant such clerks 30 days annual leave.

Retirement of disabled or superannuated clerks.—The requirements of the Railway Mail Service are exacting and the performance of duty is attended by danger and hardship. From the nature of the work performed it is necessary that the force be active and energetic, and it must be replenished constantly with an element of that character in order to maintain a high degree of efficiency. When the work of a railway postal clerk deteriorates it is necessary to change his assignment to lighter duties. It would be well to provide for their assignments to postmasterships in second, third, and fourth class post offices if these positions are placed under the civil service. Provision should also be made for their retirement from the Railway Mail Service when disabled or superannuated upon some system of limited payment provided for by a contributory plan or otherwise.

* * * * * * *

Very respectfully,

JOSEPH STEWART,
Second Assistant Postmaster General.

Hon. A. S. BURLESON,
Postmaster General.

REPORT OF THE THIRD ASSISTANT POSTMASTER GENERAL.

POST OFFICE DEPARTMENT,
OFFICE OF THE THIRD ASSISTANT POSTMASTER GENERAL,
Washington, D. C., December 1, 1913.

SIR: I have the honor to submit the report of the operations of this bureau for the fiscal year ended June 30, 1913.

The subjects of postal administration assigned to the jurisdiction of the bureau include all those which pertain to the financial operations of the postal service and are the following:

First. The collection and distribution of the postal revenues for the purpose of meeting the obligations of the service when and where payable, including the payment of indebtedness not settled by postmasters, and the handling of matters affecting the postal revenues.

Second. The postal savings system, including the supervision of the conduct of postal savings business at depository offices, and, under the direction of the board of trustees of the system, the management and investment of the funds received as deposits.

Third. The postal money-order system, including the supervision of the conduct of domestic and international money-order business, and the preparation of conventions for the exchange of money orders with foreign countries.

Fourth. The classification of mail matter, including the supervision of the collection and refund of postage, and the determination of questions relating to the admissibility, limit of weight, and size of mail, the right of newspapers and periodicals to second-class postage rate, and the use of penalty envelopes and the franking privilege.

Fifth. The production, distribution, and redemption of stamped paper.

Sixth. The registry system, including the supervision of the conduct of domestic and foreign registry business and the insurance and collect-on-delivery features of the domestic parcel post, and the handling of claims for indemnity for lost registered, insured, and collect-on-delivery mail.

The 453 officers and clerks provided by law for this bureau at salaries aggregating $566,160, including the stamped-envelope agency at Dayton, Ohio, are assigned as follows: To the immediate office of the Third Assistant Postmaster General, 9; Division of Finance, 23; Division of Postal Savings, 188; Division of Money Orders, 59; Division of Classification, 47; Division of Stamps, 85; Division of Registered Mails, 25; stamped envelope agency at Dayton, Ohio, 17.

On May 1, 1913, the Division of Redemption, previously conducted as a separate division of the bureau, was consolidated with the Division of Stamps, and on the same date the business of the Postal Savings System, previously conducted under the immediate supervision of the Postmaster General, was transferred to this bureau and a division created, known as the Division of Postal Savings. The duty of regulating box-rent rates and deposits for keys of lock boxes in post offices was also transferred from the Division of Salaries and Allowances in the bureau of the First Assistant Postmaster General to the Division of Finance of this bureau.

DIVISION OF FINANCE.

FINANCIAL STATEMENT.

The report of the Auditor for the Post Office Department for the fiscal year ended June 30, 1913, shows that the revenues of the postal service during that period, including the revenues from money-order business, amounted to $266,619,525.65, an increase of 8.05 per cent over the preceding year, as compared with an increase of 3.72 per cent for the fiscal year 1912 over 1911. The audited expenditures for the same period are shown to be $262,067,541.33, an increase of 5.44 per cent over the preceding year, as compared with an increase of 4.57 per cent for the fiscal year 1912 over 1911. From the excess of revenues over expenditures of $4,551,984.32 charges against revenues are deducted amounting to $41,333.41 for allowances to postmasters on account of fire, burglary, and other unavoidable casualty, and a surplus of $4,510,650.91 is reported. The marked increase in revenues is due to the operation of the Parcel Post System, which was inaugurated on January 1, 1913.

The following statements show the revenues and expenditures for the year, in detail, as reported by the Auditor for the Post Office Department.

STATEMENT No. 1.—*Revenues of the postal service for the fiscal year ended June 30, 1913, classified according to source of revenue.*

Sources of revenue.	Quarter ended—				Total for fiscal year.
	Sept. 30, 1912.	Dec. 31, 1912.	Mar. 31, 1913.	June 30, 1913.	
Sales of postage stamps, stamped envelopes, postal cards, etc	$52,733,533.53	$63,400,462.67	$64,192,268.44	$59,422,773.91	$239,749,038.55
Second-class postage, paid in money	2,304,935.17	2,562,301.03	2,593,738.39	2,514,374.33	9,975,348.92
Third and fourth-class postage, paid in money	1,283,001.67	1,570,550.98	2,024,046.29	1,167,161.31	6,044,760.25
Box rents	1,183,519.20	1,189,771.24	1,197,625.94	1,209,846.39	4,780,762.77
Miscellaneous receipts	21,118.39	20,632.48	47,943.35	65,686.09	155,380.31
Letter postage, paid in money	59,059.48	196.67	178.64	147,874.86	207,309.65
Fines and penalties	9,429.77	29,174.66	25,780.45	29,265.58	93,650.46
Dead letters	4,315.71	5,541.54	15,375.88	5,909.88	31,143.01
Revenues from money-order business	1,146,430.10	1,498,901.48	1,266,198.10	1,277,211.29	5,188,740.97
Unpaid money orders more than 1 year old	393,390.76				393,390.76
Total	59,138,733.78	70,277,532.75	71,363,155.48	65,840,103.64	266,619,525.65

STATEMENT No. 2.—*Expenditures of the postal service during the fiscal year ended June 30, 1913, classified according to the official titles of the appropriation out of which the payments were made.*

Title of appropriation.	Fiscal years on account of which expenditures were made.				Total expenditures during the fiscal year 1913.
	1913	1912	1911	1911 and prior years.	
Office of the Postmaster General.					
Advertising		$4,278.69			$4,278.69
Rent of buildings, Post Office Department	$26,200.00	8,200.00			34,400.00
Electric power, light, etc.	3,531.25	1,102.50			4,633.75
Post-office inspectors	1,097,449.69	92,668.70	$202.08		1,190,320.47
Payment of rewards	1,034.97	13,114.18	2,797.00	[1] $575.00 [2] 100.00	17,621.15
Miscellaneous expenses, Postmaster General	107.35	77.35			184.70
Parcel post	87,104.82				87,104.82
Office of the First Assistant Postmaster General.					
Compensation to postmasters	29,130,525.74	1,519.65	[3] 5,793.36	[1] 410.44	29,126,662.47
Assistant postmasters and clerks in post offices	45,772,934.10	11,537.33	1,149.91	[1] 205.00	45,785,826.34
Rent, light, and fuel	4,397,976.41	21,922.52	700.50	[1] 505.74 [2] 30.83	4,421,136.00
Miscellaneous items, first and second class offices	314,514.53	2,674.14	8.32		317,196.99
Canceling machines, etc.	294,965.07	12,031.00		[1] 37.50	307,033.57
Labor-saving devices, Chicago post office	5,644.21				5,644.21
Mechanical and labor-saving devices	39,571.72	362.60	6,015.00		45,949.32
City Delivery Service	36,630,493.26	10,160.86	15.95	[1] 9,496.50	36,650,166.57
Special Delivery Service	1,675,491.72	189.79	2.08	[1] .08	1,675,683.67
Miscellaneous expenses, First Assistant Postmaster General	321.70	36.16	[3] 29.40		328.46
Office of the Second Assistant Postmaster General.					
Mail transportation in Alaska—star	178,798.93	52,484.23			231,283.16
Mail transportation—boat	709,815.00	123,997.97	828.34	[1] 1,323.75	835,965.06
Mail-messenger service	1,504,373.35	142,840.04	[3] 15.00	[1] 3.87	1,647,202.26
Pneumatic-tube service	872,404.74	78,361.13			950,765.87
Wagon service	1,580,125.01	140,891.89			1,721,016.90
Mail bags, etc.	264,464.43	18,744.50	10.50		283,219.43
Laborers, mail-bag repair shops	97,478.08	89.03			97,567.11
Mail equipment shop, Chicago, Ill.	2,163.99	40.88			2,204.87
Mail locks and keys, etc	10,933.41	2,185.16	[3] 7.50		13,111.07
Laborers, mail-lock repair shop	34,607.37				34,607.37
Mail transportation—railroad	43,343,950.31	4,050,340.48	[3] 1,290.44	[1] 266.04	47,393,266.39
Freight on mail bags, postal cards, etc.	313,483.56	124,508.55	5,431.44	[1] 346.69	443,770.24
Railway post-office car service	3,579,198.71	986,693.36	229.20		4,566,121.27
Railway Mail Service	22,708,011.95	217,360.05	185.77	[1] 56.34	22,925,614.11
Electric and cable car service	634,612.18	59,250.07			693,862.25
Transportation of foreign mails	2,693,260.87	862,963.04	637.22	[1] 299.79	3,557,160.92
Assistant superintendent, Division of Foreign Mails	2,500.00	208.34			2,708.34
Balances due foreign countries	467,285.74	223,476.64			690,762.38
Miscellaneous expenses, Second Assistant Postmaster General	186.50	119.33	29.40		335.23
Office of the Third Assistant Postmaster General.					
Manufacture of postage stamps	650,945.21	36,435.81			687,381.02
Manufacture of stamped envelopes and newspaper wrappers	1,324,278.45	93,247.26			1,417,525.71
Distribution of stamped and official envelopes, etc.	20,904.50	45.00			20,949.50
Manufacture of postal cards	243,088.96	28,837.44			271,926.40
Ship, steamboat, and way letters	67.96				67.96
Indemnities, domestic registered mail	14,718.46	22,938.02	4,014.30	[1] 668.10	42,338.88

[1] 1911 and prior years, certified claims. [2] 1909. [3] Net refunded expenditures.

STATEMENT No. 2.—*Expenditures of the postal service during the fiscal year ended June 30, 1913, classified according to the official titles of the appropriation out of which the payments were made*—Continued.

Title of appropriation.	Fiscal years on account of which expenditures were made.				Total expenditures during the fiscal year 1913.
	1913	1912	1911	1911 and prior years.	
Office of the Third Assistant Postmaster General—Continued.					
Indemnities, international registered mail	$100.08	$1,328.29	$2,725.46	[1] $216.35 [2] 2,956.07 [3] 61.19	$7,387.44
Miscellaneous expenses, Third Assistant Postmaster General	468.83	39.78			508.61
Unpaid money orders more than 1 year old	391,892.22				391,892.22
Office of the Fourth Assistant Postmaster General.					
Stationery	97,223.84	7,955.16			105,179.00
Official and registry envelopes	65,069.62	5,981.89			71,051.51
Inspection agency, Cincinnati, Ohio	5,010.54				5,010.54
Supplies, money-order service	116,471.32	16,072.49			132,543.81
Supplies, registry system	2,455.52	3,419.04			5,874.56
Supplies, city-delivery service	57,643.39	20,282.70	250.00	[2] 4,236.00	82,412.09
Postmarking, rating, and money order stamps	33,538.60	9,884.15			43,422.75
Letter balances, scales, etc	3,662.90	2,080.85			5,743.75
Wrapping paper	6,526.21	3,244.74			9,770.95
Wrapping twine and tieing devices	194,980.53	12,210.56			207,191.09
Facing slips, etc	62,221.19	13,580.52			75,801.71
Office appliances	40,398.36	22,793.08			63,191.44
Supplies, rural delivery service	22,307.39	17,034.19			39,341.58
Shipment of supplies	68,078.34	24,944.31	228.50	[4] 307.86	93,559.01
Intaglio seals, Foreign Mail Service	7,909.69	79.96			7,989.65
Mail transportation—star	6,205,543.92	641,221.17	3,029.22	[4] 1,482.01	6,851,276.32
Rural delivery service	45,566,695.23	95,670.21	376.39	[4] 329.79	45,663,071.62
Miscellaneous expenses, Fourth Assistant Postmaster General	384.25	32.55			416.80
Total	253,678,106.18	8,343,789.33	21,730.88	23,914.94	262,067,541.33

[1] 1910. [2] 1909. [3] 1908. [4] 1911 and prior years, certified claims.

STATEMENT No. 3.—*Comparative statement of audited postal revenues, audited postal expenditures, percentages of increase or decrease in revenues and expenditures, losses by fire, burglary, etc., postal surpluses and postal deficits, from 1837 to 1913, inclusive, as reported by the Auditor for the Post Office Department.*

Fiscal year—	Audited revenues.	Per cent of increase as compared with previous fiscal year.	Per cent of decrease as compared with previous fiscal year.	Audited postal expenditures.	Per cent of increase as compared with previous fiscal year.	Per cent of decrease as compared with previous fiscal year.	Losses by fire, burglary, etc.	Postal surplus.	Postal deficit.
1837	$4,101,703.33			$3,288,319.03			[1] $0.28	$813,384.58	
1838	4,238,733.46	3.34		4,430,662.21	34.74				$191,928.75
1839	4,484,656.70	5.80		4,636,536.31	4.64				151,879.61
1840	4,543,521.92	1.31		4,718,235.64	1.76				174,713.72
1841	4,407,726.27		3.01	4,499,686.73		4.63			91,960.46
1842	4,546,849.65	3.16		5,672,751.76	26.07		[1] 1,688.81		1,124,213.30
1843	4,296,225.43		5.51	4,374,753.71		22.88	90.56		78,618.84
1844	4,237,287.83		1.47	4,298,512.70		1.74	115.25		61,340.12
1845	4,289,841.80	1.24		4,320,731.99	.51		5,959.94		36,850.13
1846	3,487,199.35		18.71	4,076,036.91		5.66	44,480.66		633,318.22
1847	3,880,309.23	11.27		3,979,542.10		2.36	101,586.29		200,819.16

[1] Amount of balances due late postmasters closed to "suspense" in excess of losses.

STATEMENT No. 3.—*Comparative statement of audited postal revenues*—Continued.

Fiscal year—	Audited revenues.	Per cent of increase as compared with previous fiscal year.	Per cent of decrease as compared with previous fiscal year.	Audited postal expenditures.	Per cent of increase as compared with previous fiscal year.	Per cent of decrease as compared with previous fiscal year.	Losses by fire, burglary, etc.	Postal surplus.	Postal deficit.
1848..	$4,555,211.10	17.39	.....	$4,326,850.27	8.72	.....	$53,609.36	$174,751.47	.....
1849..	4,705,176.28	3.31	.....	4,479,049.13	3.51	.....	[1] 1,385.41	227,512.56	.....
1850..	5,499,984.86	16.89	.....	5,212,953.43	16.38	.....	291.49	286,739.94	.....
1851..	6,410,604.33	16.56	.....	6,278,401.68	20.43	.....	308.03	131,894.62	.....
1852..	5,184,526.84	.....	19.13	7,108,459.04	13.22	.....	[1] 909.35	.....	$1,923,022.85
1853..	5,240,724.70	1.08	.....	7,982,756.59	12.29	.....	332.78	.....	2,742,364.67
1854..	6,255,586.22	19.36	.....	8,577,424.12	7.44	.....	30,862.08	.....	2,352,699.98
1855..	6,642,136.13	6.18	.....	9,968,342.29	16.21	.....	649.99	.....	3,326,856.15
1856..	6,920,821.66	4.19	.....	10,405,286.36	4.38	.....	2,581.82	.....	3,487,046.52
1857..	7,353,951.76	6.26	.....	11,508,057.93	10.59	.....	[1] 387.77	.....	4,153,718.40
1858..	7,486,792.86	1.81	.....	12,722,470.01	10.55	.....	[1] 833.45	.....	5,234,843.70
1859..	7,968,484.07	6.44	.....	11,458,083.63	.....	9.93	[1] 571.30	.....	3,489,028.26
1860..	8,518,067.40	6.89	.....	19,170,609.99	67.31	.....	[1] 3.93	.....	10,652,538.66
1861..	8,349,296.40	.....	1.98	13,606,759.11	.....	29.02	[1] 5,495.73	.....	5,251,966.98
1862..	8,299,820.90	.....	.48	11,125,364.13	.....	18.23	601.12	.....	2,826,144.35
1863..	11,163,789.59	34.51	.....	11,314,206.84	1.69	.....	[1] 7,792.11	.....	142,625.14
1864..	12,438,253.78	11.42	.....	12,644,786.20	11.76	.....	198,282.30	.....	404,814.72
1865..	14,556,158.70	17.03	.....	13,694,728.28	8.30	.....	[1] 55,819.08	917,249.50	.....
1866..	14,386,986.21	.....	1.16	15,352,079.30	12.10	.....	[1] 31,241.99	.....	933,851.10
1867..	15,237,026.87	5.91	.....	19,235,483.46	25.29	.....	[1] 26,104.67	.....	3,972,351.92
1868..	16,292,600.80	6.93	.....	22,730,792.65	18.17	.....	107,156.35	.....	6,545,348.20
1869..	17,314,175.72	6.27	.....	23,698,131.50	4.25	.....	[1] 20,218.58	.....	6,363,737.20
1870..	18,879,536.73	9.04	.....	23,998,837.63	1.26	.....	[1] 21,446.79	.....	5,097,854.11
1871..	20,037,045.42	6.13	.....	24,390,104.08	1.63	.....	5 693.55	.....	4,358,752.21
1872..	21,915,426.37	9.37	.....	26,658,192.31	9.29	.....	6,328.17	.....	4,749,094.11
1873..	22,996,741.57	4.93	.....	29,084,945.67	9.10	.....	40,688.74	.....	6,128,892.84
1874..	26,471,071.82	15.11	.....	32,126,414.58	10.45	.....	102,565.31	.....	5,757,908.07
1875..	26,791,313.54	1.21	.....	33,611,309.45	4.62	.....	324.93	.....	6,820,320.84
1876..	28,644,197.50	6.92	.....	33,263,487.58	.....	1.03	27,962.96	.....	4,647,253.04
1877..	27,531,585.26	.....	3.88	33,486,322.44	.66	.....	172,618.84	.....	6,127,356.02
1878..	29,277,516.95	6.34	.....	34,165,084.49	2.02	.....	17,461.74	.....	4,905,029.28
1879..	30,041,982.86	2.61	.....	33,449,899.45	.....	2.09	8,016.41	.....	3,415,933.00
1880..	33,315,479.34	10.89	.....	36,542,803.68	9.24	.....	[1] 5,370.86	.....	3,221,953.48
1881..	36,785,397.97	10.41	.....	39,592,566.22	8.34	.....	14,790.86	.....	2,821,959.11
1882..	41,876,410.15	13.84	.....	40,482,021.23	2.24	.....	140,465.35	1,253,923.57	.....
1883..	45,508,692.61	8.67	.....	43,282,944.43	6.91	.....	44,395.61	2,181,352.57	.....
1884..	43,325,958.81	.....	4.80	47,224,560.27	9.10	.....	8,455.83	.....	3,907,057.29
1885..	42,560,843.83	.....	1.77	50,046,235.21	5.97	.....	[1] 3,091.16	.....	7,481,410.22
1886..	43,948,422.95	3.26	.....	51,004,743.80	1.91	.....	12,174.25	.....	7,068,495.10
1887..	48,837,609.39	11.12	.....	53,006,194.39	3.92	.....	[1] 23,566.80	.....	4,145,018.20
1888..	52,695,176.79	7.90	.....	56,468,315.20	6.53	.....	[1] 672.38	.....	3,772,466.03
1889..	56,175,611.18	6.60	.....	62,317,119.36	10.35	.....	27,596.26	.....	6,169,104.44
1890..	60,882,097.92	8.31	.....	66,259,547.84	6.32	.....	23,314.52	.....	5,400,764.44
1891..	65,931,785.72	8.21	.....	73,059,519.49	10.26	.....	22,876.36	.....	7,150,610.13
1892..	70,930,475.98	7.58	.....	76,980,846.16	5.36	.....	60,605.79	.....	6,110,975.97
1893..	75,896,933.16	7.00	.....	81,581,681.33	5.97	.....	32,040.58	.....	5,716,788.75
1894..	75,080,479.04	.....	1.08	84,994,111.62	4.18	.....	63,882.74	.....	9,977,515.32
1895..	76,983,128.19	2.53	.....	87,179,551.28	2.57	.....	34,019.04	.....	10,230,442.13
1896..	82,499,208.40	7.17	.....	90,932,669.50	4.30	.....	10,740.21	.....	8,444,201.31
1897..	82,665,462.73	.20	.....	94,077,242.38	3.45	.....	19,799.76	.....	11,431,579.41
1898..	89,012,618.55	7.68	.....	98,033,523.61	4.20	.....	33,646.69	.....	9,054,551.75
1899..	95,021,384.17	6.75	.....	101,632,160.92	3.67	.....	19,358.85	.....	6,630,135.60
1900..	102,354,579.29	7.72	.....	107,740,267.99	6.01	.....	24,669.40	.....	5,410,358.10
1901..	111,631,193.39	9.06	.....	115,554,920.87	7.25	.....	67,793.23	.....	3,981,520.71
1902..	121,848,047.26	9.15	.....	124,785,697.07	7.98	.....	23,520.10	.....	2,961,169.91
1903..	134,224,443.24	10.16	.....	138,784,487.97	11.21	.....	26,932.43	.....	4,586,977.16
1904..	143,582,624.34	6.97	.....	152,362,116.70	9.78	.....	33,276.81	.....	8,812,769.17
1905..	152,826,585.10	6.44	.....	167,399,169.23	9.86	.....	21,802.99	.....	14,594,387.12
1906..	167,932,782.95	9.88	.....	178,449,779.89	6.60	.....	25,945.82	.....	10,542,941.76
1907..	183,585,005.57	9.32	.....	190,238,288.34	6.60	.....	38,748.70	.....	6,692,031.47
1908..	191,478,663.41	4.30	.....	208,351,886.15	9.52	.....	37,056.25	.....	16,910,278.99
1909..	203,562,383.07	6.31	.....	221,004,102.89	6.07	.....	38,050.65	.....	17,479,770.47
1910..	224,128,657.62	10.10	.....	229,977,224.50	4.06	.....	32,915.07	.....	5,881,481.95
1911..	237,879,823.60	6.14	.....	237,648,926.68	3.33	.....	11,778.80	219,118.12	.....
1912..	246,744,015.88	3.72	.....	248,525,450.08	4.57	.....	4,088.90	.....	1,785,523.10
1913..	266,619,525.65	8.05	.....	262,067,541.33	5.44	.....	41,333.41	4,510,650.91	.....

[1] Amount of balances due late postmasters closed to "suspense" in excess of losses.

The foregoing statement, although expressing the fact with respect to the results of fiscal administration in so far as the audit of accounts is concerned, does not, however, show the cost of handling postal business during the year, and the postage and fees paid for same, and therefore does not bring together items of cost and revenue which bear a relation to each other. The need for such a statement is apparent.

The financial statements recently published by the department, showing surpluses and deficiencies, have in reality been copies of the reports of the Auditor for the Post Office Department giving the revenues and expenditures actually collected and paid during a given year as shown by the audited accounts of fiscal agents and public creditors of the department. The revenues of the service are collected in cash with the exception of a few items, comparatively insignificant in amount, which relate to international adjustments. The published reports of revenues have therefore been approximately correct. The expenses of the service, however, have been stated on the basis of payments actually made during the year, on account of the current and previous years, and have not taken into account obligations incurred for the service of the current year but not paid up to the close thereof. The audit of accounts is necessarily restricted to those showing actual receipt and payment of money and the report of the auditor can state only the results of the audit. It is clear, therefore, that the annual financial statements of the department have been stated on an improper basis in that they have not given the obligations incurred for the service of the year on which report is made. Whether or not such obligations were liquidated is interesting and useful information but is, notwithstanding, of secondary importance.

There are certain practical reasons, however, which make it impossible to state these obligations definitely and finally at the time the annual report of the department is published, although it is possible to present a statement which will approximate the final results. The appropriations made by Congress are available during the fiscal year for which they are made and for two years thereafter, making the life of an appropriation three full fiscal years. Experience has shown that accounts for a given fiscal year, principally those on which controversies have arisen, are adjusted and paid at all times during these three years; in fact, many contested claims are not adjusted until after the appropriations intended to cover them have become unavailable by operation of law. Experience has also shown, however, that practically all expenditures on account of a given fiscal year are settled within the year and within the next quarter after its close, the accounts paid thereafter amounting to less than one-half of 1 per cent.

The following statements have been prepared along the lines above indicated, for the purpose of showing what is believed to be the approximately correct results of financial administration for the fiscal years 1911, 1912, and 1913. While they do not present the definite final results for the years named, it is not believed that such results will materially differ.

The statement for the fiscal year 1911 shows an approximate deficiency of $732,301.90 instead of a surplus of $219,118.12, as claimed in the annual report for that year. The actual deficiency to

June 30, 1913, based on payments made on account of the year 1911 up to that time, was $720,768.63. Obligations were then outstanding amounting to approximately $11,533.27. The statement for the fiscal year 1912 shows an approximate deficiency of $1,893,057.09, instead of $1,785,523.10, as claimed in the annual report for that year. The statement for the fiscal year 1913 shows that the surplus for that year should be approximately $3,841,906.78 instead of $4,510,650.91, as reported by the Auditor for the Post Office Department, and hereinbefore stated. These differences clearly demonstrate the usefulness of statements prepared along these lines, although the results can not be definitely and finally stated until all claims for the given year are settled.

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DIVISION OF POSTAL SAVINGS.

The act of Congress approved June 25, 1910, provides for the establishment of "postal-savings depositories for depositing savings at interest with the security of the Government for repayment thereof," and created a Board of Trustees "for the control, supervision, and administration of the postal-savings depository offices designated and established under the provisions of this act, and of the funds received as deposits at such postal-savings depository offices by virtue thereof." The act further provides that the Board of Trustees "shall consist of the Postmaster General, the Secretary of the Treasury, and the Attorney General, severally, acting ex officio, and shall have power to make all necessary and proper regulations for the receipt, transmittal, custody, deposit, investment, and repayment of the funds deposited at postal-savings depository offices."

The organic act was later modified by an amendment approved August 24, 1912, which provides "That the Postmaster General shall select and designate the post offices which are to be postal-savings depository offices, and shall appoint and fix the compensation of such superintendents, inspectors, and other employees as may be necessary in conducting, supervising, and directing the business of such offices, including the employees of a central office at Washington, District of Columbia, * * *. He shall also from time to time make rules and regulations with respect to the deposits in and withdrawals of moneys from postal-savings depositories and the issue of pass books or such other devices as he may adopt as evidence of such deposits or withdrawals."

THE CENTRAL OFFICE AT WASHINGTON.

Under the statutory provisions quoted the function of administering the Postal Savings System is divided into two parts. All matters incident to the selection and designation of post offices as depository offices and the supervision of the postal-savings business transacted thereat, and the conduct of the central office of the system at Washington, is made part of the administrative machinery of the Post Office Department. All matters incident to the management and investment of funds arising under the provisions of the act after they leave the hands of postmasters are delegated to the Board of Trustees. The central office at Washington, while a part of the organization of

the Post Office Department, handles the business of the system, both for the department and for the Board of Trustees.

From the date of the organization of the system until May 1, 1913, the central office was conducted under the immediate supervision of the Postmaster General. On the latter date the business of the system, together with the corps of employees, was transferred and assigned to the Bureau of the Third Assistant Postmaster General, and a division created known as the Division of Postal Savings, thus completing the assignment of all fiscal affairs of the Post Office Department to that bureau. The Third Assistant Postmaster General was elected as the secretary of the Board of Trustees, and constituted its agent for all purposes connected with the administrative duties to be performed through the central office. Thus all business charged to the Post Office Department is performed in the Division of Postal Savings under the immediate supervision of the Third Assistant Postmaster General as an officer of the Post Office Department, and all business of the Board of Trustees is performed through or by the same official, either in his capacity as secretary or as agent of the board for the performance of certain specified duties.

A reorganization of the working force and a revision of business methods immediately followed the transfer of the central office with the result that important economies have been effected and the work of the service greatly facilitated.

The employees of the central office, up to June 30, 1913, were not appropriated for in the usual manner but were paid from a special lump sum appropriated for "Establishing postal savings depositories." With the beginning of the fiscal year 1914, however, the expenses directly chargeable to the Postal Savings System have been provided for as a part of the appropriations for the administration of the Post Office Department and the service of the Post Office Department. On July 1, 1913, therefore, the clerical positions in the Division of Postal Savings became statutory.

The postal-savings act requires that the Board of Trustees shall submit a report to Congress at the beginning of each regular session, covering certain specified results of the operation of the system. The report for the fiscal year ended June 30, 1913, has been transmitted to Congress.

CHANGES IN PROCEDURE.

Coincident with the transfer of the Postal Savings System to the Bureau of the Third Assistant Postmaster General, a committee of Post Office Department officials was appointed for the purpose of making such recommendations for amendments and changes in the regulations, instructions, and forms heretofore issued and adopted as appeared to be necessary or desirable, and such other recommendations as might be necessary to carry into effect the provisions of the Postmaster General's order making the transfer.

This committee made a complete review of the procedure theretofore adopted for the conduct of the system. As a result of their recommendations many changes in procedure were adopted by the Postmaster General and the Board of Trustees which were embodied in the pamphlets of instruction and in the books and forms used in connection with the business of the system. The changes so made

have had the effect of expediting and simplifying the transaction of postal-savings business at post offices, at banks, and in the department.

Among the more important changes may be mentioned a revision of previous regulations under which postmasters at depository offices were required to maintain deposits in qualified banks in their own names and official capacities for the purpose of obtaining funds to meet withdrawals in excess of their current receipts, the accounts being known as postmasters' emergency credits. This practice is abolished by the provisions of the new regulations. The postmaster in a city or town where one or more local banks have qualified now deposits all funds to the credit of the Board of Trustees, and one bank is authorized to honor his checks to a specified amount in each calendar month for the purpose of meeting withdrawals in excess of receipts.

The regulations which required postmasters at places where no local banks had qualified to remit their funds to the most convenient place where banks had qualified, and to apportion them among all the banks which had qualified at that place, were changed, and the postmaster now remits his postal savings receipts to the postmaster in the city where the banks are located, who includes the remittances with the receipts of his own office and deposits them in the banks as though they had accrued at his own office. Funds not to exceed a specified amount in each calendar month are obtained at a remitting office to meet excess of withdrawals over receipts by drawing drafts on the postmaster at the banking point. This innovation has effected a reduction of approximately 7,000 accounts which the banks were theretofore required to maintain and report, and has eliminated the voluminous correspondence and petty annoyances attending an unwieldy method.

Under the old regulations a postal-savings card with nine savings stamps affixed could be redeemed in cash only by the opening of an account, the issuance of a certificate, and the payment of the certificate. The revised regulations permit the holder to receive immediate payment in cash should he not desire to open an account for the conversion of his deposits into an interest-bearing account.

GROWTH OF THE SYSTEM.

The growth of the system has been steady and substantial. On June 30, 1911, at the close of the first six months of operation, there were 11,918 depositors with $677,145 to their credit and the average principal of deposits per depositor was $56.82. On December 30, 1911, at the close of the first year, there were 162,697 depositors with $10,614,676 to their credit and the average was $65.24. On June 30, 1912, there were 243,801 depositors with $20,237,084 to their credit and the average was $83.01. On December 31, 1912, at the close of the second year, there were 302,157 depositors with $28,057,059 to their credit and the average was $92.86. On June 30, 1913, at the close of two and a half years there were 331,006 depositors with $33,818,870 to their credit and the average was $102.

The statement following shows the growth of the system in detail.

Statement showing the growth of the Postal Savings System and a summary of transactions since the time it went into operation, by months.

Month.	In operation.			Deposits.	Withdrawals.[1]	Balance to credit of depositors.[1]	Increase.		Number of depositors.	Average principal per depositors.	Savings cards and stamps.			Balance on deposit in banks.
	Offices.	Branches and stations.	Total depositories.				Amount.	Per cent.			Sold.	Converted into deposits.	Outstanding at close of month.	
June, 1913	12,158	662	12,820	$3,388,147.00	$2,626,339.00	$33,818,870.00	$761,808	2.0	331,006	$102.00	$10,498.60	$10,848.00	$40,527.70	$31,512,337.46
May	12,158	662	12,820	3,593,286.00	2,709,578.00	33,057,062.00	883,708	2.7	.....	.....	11,966.90	12,643.00	40,877.10	31,871,892.76
April	12,158	663	12,821	3,458,651.00	2,561,712.00	32,173,354.00	896,939	4.0	.....	.....	13,175.60	12,983.00	41,553.20	31,016,514.45
March	12,160	663	12,823	3,714,762.00	2,464,672.00	31,276,415.00	1,250,090	4.2	.....	.....	14,596.80	14,407.00	41,360.60	30,812,839.46
February	12,167	658	12,825	3,460,541.00	1,966,359.00	30,026,325.00	1,494,182	5.2	.....	.....	13,828.60	12,517.00	41,170.80	29,607,322.78
January, 1913	12,174	649	12,823	3,637,451.00	3,162,367.00	28,532,143.00	475,084	1.7	.....	.....	16,055.80	13,702.00	39,859.20	28,149,391.57
December	12,177	646	12,823	3,250,096.00	2,315,114.00	28,057,059.00	934,982	3.4	302,157	92.86	11,405.50	13,505.00	37,505.40	26,341,644.33
November	12,166	646	12,812	3,616,985.00	2,089,565.00	27,122,077.00	1,527,420	6.0	.....	.....	13,427.90	12,850.00	39,604.90	26,428,361.07
October	12,130	645	12,775	3,449,375.00	2,011,519.00	25,594,657.00	1,437,856	6.0	.....	.....	13,798.30	12,738.00	39,027.00	24,946,302.40
September	12,132	628	12,760	3,323,733.00	1,912,360.00	24,156,801.00	1,411,373	6.2	.....	.....	12,787.80	11,999.00	37,966.70	23,482,125.77
August	12,110	595	12,705	3,536,960.00	2,563,517.00	22,745,428.00	973,443	4.5	.....	.....	16,855.40	13,836.00	37,177.90	21,979,129.43
July	11,037	393	11,430	3,271,396.00	1,736,495.00	21,771,985.00	1,534,901	7.6	.....	.....	12,893.80	12,756.00	34,158.50	20,297,069.84
June	9,907	263	10,170	2,961,646.00	1,604,871.00	20,237,084.00	1,356,775	7.2	243,801	83.01	12,666.70	12,657.00	34,020.70	18,586,042.32
May	8,870	141	9,011	2,972,903.00	1,559,023.00	18,880,309.00	1,413,880	8.1	.....	.....	13,494.30	12,887.00	34,011.00	18,111,085.92
April	7,865	115	7,980	2,980,563.00	1,532,912.00	17,466,429.00	1,447,651	9.0	.....	.....	15,093.80	13,968.00	33,403.70	16,686,291.88
March	7,164	112	7,276	3,065,452.00	1,358,040.00	16,018,778.00	1,707,412	11.9	.....	.....	17,386.00	15,356.00	32,277.90	15,851,145.64
February	6,660	105	6,765	3,032,951.00	1,460,357.00	14,311,366.00	1,572,594	12.3	.....	.....	16,587.00	14,213.00	30,247.90	14,090,391.01
January—1912	6,164	66	6,230	3,109,703.00	985,607.00	12,738,772.00	2,124,096	20.0	.....	.....	17,973.20	13,859.00	27,873.90	11,970,140.27
December	5,070	62	5,132	2,919,872.00	985,170.00	10,614,676.00	1,934,702	22.3	162,697	65.24	14,429.20	14,725.00	23,759.70	9,668,301.52
November	4,176	58	4,234	2,911,476.00	671,763.00	8,679,974.00	2,239,713	34.8	.....	.....	18,139.40	12,844.00	24,055.50	8,026,847.08
October	3,139	56	3,195	2,837,918.00	473,304.00	6,440,261.00	2,364,614	58.0	.....	.....	17,216.50	11,330.00	18,760.10	5,439,713.24
September	1,970	.....	1,970	2,185,438.00	282,645.00	4,075,647.00	1,902,793	87.6	.....	.....	12,891.70	6,720.00	12,873.60	2,993,018.77
August	1,277	.....	1,277	1,175,618.00	184,819.00	2,172,854.00	990,799	83.8	.....	.....	7,689.30	3,936.00	6,701.90	1,535,137.50
July	998	.....	998	578,817.00	73,907.00	1,182,055.00	504,910	74.6	.....	.....	2,911.90	1,851.00	2,948.60	973,390.73
June	400	.....	400	316,714.00	34,500.00	677,145.00	282,214	71.5	11,918	56.82	1,236.60	690.00	1,887.70	571,670.90
May	93	.....	93	154,505.00	28,016.00	394,931.00	126,489	47.1	.....	.....	735.10	581.00	1,341.10	381,977.90
April	48	.....	48	82,646.00	16,165.00	268,442.00	66,481	32.9	.....	.....	398.30	338.00	1,187.00	264,508.32
March	48	.....	48	80,701.00	12,609.00	201,961.00	68,092	50.9	.....	.....	652.80	498.00	1,126.70	191,878.97
February	48	.....	48	81,753.00	7,990.00	133,869.00	73,768	122.7	.....	.....	822.50	402.00	971.90	110,844.38
January—1911	48	.....	48	61,805.00	1,704.00	60,101.00	.....	.....	.....	.....	980.40	429.00	551.40	.....

[1] In several instances the marked variations in withdrawals and balances on deposit are due to the semiannual conversion of deposits into postal-savings bonds. For details of the various conversions, see paragraph entitled "Postal-savings bonds."

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DEPOSITORY POST OFFICES.

The Postal Savings System was inaugurated experimentally on January 3, 1911, at 48 second-class post offices designated as postal-savings depositories, one in each State. On June 30, 1911, at the close of the first six months, 400 depositories were in operation. On June 30, 1912, there were 10,170 depositories in operation, including 263 branches and stations. On June 30, 1913, there were 12,820 depositories in operation, including 662 branches and stations. Since June 30 the service has been extended to 210 presidential offices not theretofore designated as depositories, completing the installation of savings facilities at all presidential post offices. Arrangements have also been perfected for the extension of the service to the presidential offices in the Hawaiian Islands and in Porto Rico. It will be extended to other post offices and stations as rapidly as demand is shown.

The following statement shows the extension of the system to June 30, 1913, in detail:

Statement showing number and class of post offices designated as postal savings depositories in operation on June 30, 1913, by States.

State.	First class.	Second class.	Third class.	Fourth class.	Total post offices.	Branches.	Stations.	Total depositories.
Alabama	4	19	89	66	178	2	2	182
Arizona	2	9	19	6	36			36
Arkansas	5	25	84	29	143	1	1	145
California	17	81	163	39	300	3	24	327
Colorado	4	29	74	52	159		11	170
Connecticut	13	33	71	2	119	5	7	131
Delaware	1	3	18	5	27			27
District of Columbia	1				1		5	6
Florida	5	24	52	33	114		2	116
Georgia	7	34	138	162	341		2	343
Idaho	1	15	54	37	107			107
Illinois	26	118	323	259	726	2	43	771
Indiana	21	70	167	176	434	2	5	441
Iowa	17	70	287	215	589		5	594
Kansas	10	57	218	185	470	1	5	476
Kentucky	6	27	88	153	274		7	281
Louisiana	4	19	69	56	148		3	151
Maine	5	27	89	5	126	1	3	130
Maryland	3	15	45	36	99	7	9	115
Massachusetts	23	72	104	6	205	59	34	298
Michigan	16	71	226	185	498	2	13	513
Minnesota	5	51	210	202	468		14	482
Mississippi	4	19	99	20	142			142
Missouri	9	47	210	312	578	7	43	628
Montana	5	14	56	33	108			108
Nebraska	4	34	197	127	362	3	7	372
Nevada	1	5	20	4	30			30
New Hampshire	5	19	44		68		3	71
New Jersey	23	53	115	7	198	15	4	217
New Mexico	1	12	28	15	56			56
New York	44	159	346	31	580	10	85	675
North Carolina	7	33	106	77	223		1	224
North Dakota	3	12	117	63	195			195
Ohio	31	97	228	146	502	6	52	560
Oklahoma	6	41	169	178	394		3	397
Oregon	2	21	75	39	137	1	2	140
Pennsylvania	35	160	332	118	645	16	56	717
Rhode Island	4	5	14	4	27	8	6	41
South Carolina	4	21	61	47	133			133
South Dakota	2	18	119	105	244			244
Tennessee	6	28	79	25	138	4	9	151
Texas	14	86	302	280	682		1	683
Utah	2	5	28	18	53	2	2	57
Vermont	3	21	37	7	68			68
Virginia	9	26	96	89	220		6	226
Washington	7	27	95	64	193	1	17	211
West Virginia	7	18	76	35	136	1		137
Wisconsin	16	64	193	162	435	1	10	446
Wyoming	1	7	25	16	49			49
Total	451	1,921	5,855	3,931	12,158	160	502	12,820

The following statement shows the deposits and withdrawals during the year, with balances on deposit, in detail:

Statement showing balances to the credit of depositors on June 30, 1912, deposits and withdrawals during the fiscal year, and balances to the credit of depositors and on deposit in banks on June 30, 1913, by States.

State	Balances to credit of depositors June 30, 1912.	Deposits during fiscal year.	Deposits withdrawn during fiscal year.	Balances to credit of depositors June 30, 1913.	Balances on deposit in banks June 30, 1913.
Alabama	$77,334	$109,165	$90,926	$95,573	$89,728.48
Arizona	217,679	369,417	307,928	279,168	268,315.47
Arkansas	75,491	136,601	95,903	116,189	108,873.97
California	1,704,636	3,590,894	2,662,534	2,632,996	2,428,327.94
Colorado	661,358	890,723	655,250	896,831	832,198.75
Connecticut	210,208	608,439	383,284	435,363	419,188.90
Delaware	23,839	63,310	37,722	49,427	47,329.10
District of Columbia	114,068	205,993	153,526	166,535	119,376.92
Florida	108,425	239,355	193,466	154,314	145,052.93
Georgia	39,395	91,243	73,248	57,390	53,890.23
Idaho	222,858	431,419	335,340	318,937	302,288.17
Illinois	1,707,828	3,093,506	1,938,445	2,862,889	2,689,685.74
Indiana	591,821	1,050,190	750,081	891,930	784,715.37
Iowa	184,944	360,298	241,462	303,780	280,635.52
Kansas	444,334	605,115	429,242	620,207	573,754.57
Kentucky	209,489	345,280	244,229	310,540	270,856.85
Louisiana	76,594	191,528	118,114	150,008	136,076.98
Maine	85,034	194,308	121,298	158,044	148,481.75
Maryland	54,807	96,580	73,448	77,939	72,955.88
Massachusetts	764,937	2,029,608	1,322,864	1,471,681	1,398,757.39
Michigan	625,302	1,479,842	959,399	1,145,745	1,064,499.43
Minnesota	907,847	1,569,254	1,009,995	1,467,106	1,379,650.49
Mississippi	55,825	102,284	72,494	85,615	78,215.38
Missouri	888,722	1,572,523	1,090,732	1,370,513	1,259,945.24
Montana	426,097	831,406	560,141	697,362	640,484.44
Nebraska	219,733	375,682	285,597	309,818	291,992.21
Nevada	285,359	467,484	416,816	336,027	310,843.73
New Hampshire	134,059	268,806	175,891	226,974	212,021.44
New Jersey	358,841	907,950	576,288	690,503	655,131.51
New Mexico	40,797	90,185	78,169	52,813	50,146.55
New York	2,349,210	6,863,124	4,202,480	5,009,854	4,755,349.51
North Carolina	29,888	46,230	39,006	37,112	34,830.15
North Dakota	27,989	55,320	45,806	37,503	34,970.41
Ohio	1,911,980	3,289,742	2,188,375	3,013,347	2,700,241.63
Oklahoma	180,710	354,413	266,330	268,793	251,651.28
Oregon	788,726	1,642,850	1,215,670	1,215,906	1,154,539.02
Pennsylvania	1,119,205	2,275,933	1,460,551	1,934,587	1,811,858.57
Rhode Island	109,799	312,693	177,938	244,554	235,377.64
South Carolina	11,297	20,898	19,041	13,154	12,164.86
South Dakota	40,945	77,831	59,786	58,990	56,965.44
Tennessee	119,815	247,081	171,275	195,621	179,082.28
Texas	327,049	686,699	502,831	510,917	479,982.39
Utah	92,959	198,872	161,661	130,170	121,715.25
Vermont	24,068	60,041	36,529	47,580	45,670.17
Virginia	104,222	206,058	144,991	165,289	151,722.11
Washington	901,599	1,827,010	1,241,999	1,486,610	1,414,634.92
West Virginia	48,924	116,191	84,686	80,429	75,045.35
Wisconsin	452,089	905,263	514,385	842,967	795,747.42
Wyoming	78,949	146,746	132,425	93,270	87,367.73
Total	20,237,084	41,701,383	28,119,597	33,818,870	31,512,337.46

The following statement gives statistical data with respect to transactions at the 50 depository offices having the largest deposits:

Statement showing balances on deposit at the fifty depository post offices having the largest deposits, with the number of depositors and the average principal per depositor.

Office.	Rank.	Number of depositors.	Balance to credit of depositors.	Average principal per depositor.	Office.	Rank.	Number of depositors.	Balance to credit of depositors.	Average principal per depositor.
New York, N. Y..	1	30,138	$2,653,574	$88	Louisville, Ky....	26	1,640	$172,779	$105
Chicago, Ill.....	2	14,670	1,808,248	123	Washington, D. C.	27	1,591	166,535	105
Brooklyn, N.Y...	3	14,253	1,007,032	71	Duluth, Minn....	28	1,126	157,386	140
Boston, Mass.....	4	11,090	862,326	78	San Diego, Cal....	29	1,194	151,885	127
Portland, Oreg...	5	5,853	777,256	133	Kansas City, Kans.	30	954	140,646	147
San Francisco, Cal.	6	6,047	743,546	123	Pittsburgh, Pa...	31	1,104	134,754	122
St. Paul, Minn...	7	5,272	713,801	135	Buffalo, N. Y.....	32	1,799	134,210	75
Cincinnati, Ohio..	8	5,059	639,278	126	Dallas, Tex.....	33	1,340	129,802	97
Kansas City, Mo..	9	4,055	515,976	127	Newark, N. J.....	34	1,850	126,674	68
Columbus, Ohio..	10	3,269	447,176	137	Indianapolis, Ind.	35	1,010	125,296	124
St. Louis, Mo.....	11	3,907	438,028	112	Astoria, Oreg.....	36	593	116,944	197
Philadelphia, Pa..	12	6,143	414,856	68	Providence, R. I..	37	1,758	113,734	65
Los Angeles, Cal..	13	3,135	403,048	129	Ironwood, Mich..	38	647	106,117	164
Detroit, Mich.....	14	3,349	395,197	118	Bisbee, Ariz.....	39	537	101,945	190
Butte, Mont.....	15	1,703	361,103	212	Bellingham, Wash.	40	682	97,176	142
Cleveland, Ohio..	16	2,993	341,020	114	Goldfield, Nev....	41	528	92,153	175
Milwaukee, Wis..	17	2,355	322,362	137	Memphis, Tenn...	42	820	89,644	109
Denver, Colo.....	18	2,308	302,582	131	Roslyn, Wash....	43	330	89,436	271
Tacoma, Wash...	19	1,915	300,434	157	Akron, Ohio.....	44	731	86,107	118
Seattle, Wash....	20	2,261	298,217	132	Anaconda, Mont..	45	483	85,532	177
Toledo, Ohio.....	21	1,613	189,713	118	New Orleans, La..	46	665	83,413	125
Oakland, Cal.....	22	1,532	188,212	123	Dayton, Ohio.....	47	792	83,232	105
Minneapolis, Minn	23	1,505	184,187	122	Aberdeen, Wash..	48	410	82,427	201
Omaha, Nebr.....	24	1,629	183,469	113	Superior, Wis.....	49	475	77,212	163
Leadville, Colo...	25	882	180,860	205	Altoona, Pa.....	50	666	75,247	113

CERTIFICATES OF DEPOSIT.

The use of certificates of deposit in fixed denominations for evidencing deposits has been continued throughout the fiscal year. A contract for supplying the blank certificates for the fiscal year 1914 has been awarded to the Bureau of Engraving and Printing at prices which have resulted in a saving of $10,650.

SAVINGS CARDS AND STAMPS.

The use of savings cards and savings stamps for the accumulation of small amounts of money has demonstrated the value of the privilege. On June 30, 1911, at the close of the first six months of operation, savings cards and stamps to the value of $4,825.70 had been sold and $2,938 converted into deposits. On June 30, 1912, $171,304.70 had been sold and $137,284 converted. On June 30, 1913, $332,595.70 had been sold and $292,068 had been converted. Those outstanding at the close of business on June 30, 1913, amounted to $40,527.70. These figures clearly indicate that this facility serves the purpose for which it was adopted, namely, to encourage economy and thrift among those who have but small sums to deposit.

POSTAL-SAVINGS BONDS.

One of the most important privileges afforded by the Postal Savings System is the opportunity to exchange deposits for United States bonds, which bear a higher rate of interest than is paid on deposits. Under the provisions of section 10 of the organic act the depositor may exchange his deposits in amounts of $20 and multiples thereof for United

States registered or coupon bonds bearing interest at the rate of 2½ per cent per annum, payable semiannually, redeemable at the pleasure of the United States after one year from date of issue, and both principal and interest being payable in 20 years from such date in United States gold coin. These bonds are exempt from all taxes or duties of the United States as well as from taxation in any form by State, municipal, or local authority. Under regulations adopted by the Board of Trustees this exchange may be made as of January 1 and July 1 of each year. Postal-savings deposits which have been exchanged for bonds are not counted as a part of the maximum of $500 allowed one depositor, and there is no limitation upon the amount of postal-savings bonds which may be acquired by a depositor. This privilege has been a popular one. There have been five bond issues since the Postal Savings System began operations, the first having been made on July 1, 1911, and semiannually since that date. In the first issue bonds amounting to $41,900 were issued to 193 applicants. On January 1, 1912, bonds amounting to $417,380 were issued to 1,865 applicants. On July 1, 1912, bonds amounting to $854,860 were issued to 2,838 applicants. On January 1, 1913, bonds amounting to $1,074,980 were issued to 3,569 applicants. On July 1, 1913, bonds amounting to $1,116,880 were issued to 3,630 applicants. The total issues to date have amounted to $3,506,000, and it is interesting to note that of this amount $2,906,700 were requested in the registered form, clearly indicating that they were purchased for permanent investment.

Under authority of the organic act the Board of Trustees of the Postal Savings System is especially empowered to invest postal-savings funds in these bonds. By resolution of the board they are purchased at par on the application of any holder and immediate payment made therefor in cash. Bonds of the value of $117,960 have been so purchased up to and including June 30, 1913.

* * * * * * *

EXTENSION OF THE SYSTEM.

A carefully planned movement is now under way to develop the system by acquainting the people with the various facilities which it affords and of which they may avail themselves. All depository postmasters have been called upon to further this movement, and as aids to systematic and persistent publicity various suggestions have been made to them for local development. The savings system is very different from other branches of the postal service, and must be developed along original lines, for the reason that there can be no spontaneous desire to save and economize—the very results that the service is designed to accomplish.

DIVISION OF MONEY ORDERS.

The increase in business during the forty-ninth year of the operation of the money-order system was slightly in excess of 7 per cent, indicating by its normal and healthy growth the continued confidence of the public in the system.

Domestic money orders were used for many years as a convenient though expensive method of protecting savings, but with the establishment of the United States Postal Savings System this function was abandoned, until now their use is almost exclusively confined to the original purpose of providing a facility for the safe and expeditious

transfer of money through the mails. In 1908, through inquiries addressed to postmasters, it was ascertained that money orders drawn upon the office of issue in favor of the remitters amounted to not less than $8,000,000, representing the savings of people who mistrusted private institutions, or who lived in remote sections of the country without banking facilities. Practically all of these orders were cashed and the money deposited in postal savings banks between January, 1911, and December, 1912. The effect of the withdrawal of this considerable sum was shown in the diminution of the percentage of increase of money-order business during the year ended June 30, 1912, and was slightly noticeable, though to a less extent, in the first half of the fiscal year ended June 30, 1913.

The following statements show the growth of the money-order system during the 49 years of its existence and present other fiscal and statistical data with relation to the operation of the system.

Growth of the domestic money-order system.

Year ended June 30—	Number of money-order offices in operation.	Number of domestic money orders issued.	Amount of domestic money orders issued.	Amount of domestic money orders paid and repaid.	Amount of fees for domestic orders.	Miscellaneous receipts.[1]
1865	419	74,277	$1,360,122.52	$1,313,577.08	$11,534.90	$1.50
1866	766	243,609	3,977,259.28	3,903,890.22	35,799.98	3.08
1867	1,224	474,496	9,229,327.72	9,071,240.73	70,888.57	1.00
1868	1,468	831,937	16,197,858.47	16,118,537.03	124,487.00	16.19
1869	1,466	1,264,143	24,848,058.93	24,654,123.46	176,190.90	56.97
1870	1,694	1,671,253	34,054,184.71	33,927,924.79	235,235.80	321.25
1871	2,076	2,151,794	42,164,118.03	42,027,336.31	295,286.15	277.23
1872	2,452	2,573,349	48,515,532.72	48,419,644.97	350,285.66	213.74
1873	2,775	3,355,686	57,516,216.69	57,295,012.27	354,602.25	214.41
1874	3,069	4,420,633	74,424,854.71	74,210,156.25	461,382.30	856.24
1875	3,404	5,006,323	77,431,251.58	77,361,690.75	493,011.44	1,705.83
1876	3,401	4,998,600	77,035,972.78	77,106,338.85	645,699.40	1,322.12
1877	3,697	4,925,931	72,820,509.70	72,908,475.25	623,748.95	660.71
1878	4,143	5,613,117	81,442,364.87	81,279,910.80	715,261.20	1,377.78
1879	4,512	6,372,213	88,254,641.02	88,006,200.20	798,625.65	721.44
1880	4,829	7,240,537	100,352,818.83	100,165,982.78	916,452.80	638.78
1881	5,163	7,663,232	105,075,769.35	104,924,853.61	966,732.75	1,040.18
1882	5,491	8,420,869	113,400,118.21	113,388,301.90	1,053,710.55	828.07
1883	5,927	8,807,556	117,329,406.31	117,344,281.78	1,101,821.80	1,016.62
1884	6,310	7,835,694	122,121,261.98	121,971,083.80	950,065.79	413.60
1885	7,056	7,725,893	117,858,921.27	117,996,205.06	923,930.85	1,193.18
1886	7,357	7,940,302	113,819,521.21	113,885,463.04	921,777.03	1,004.94
1887	7,853	9,232,177	117,462,660.89	117,264,026.66	912,876.40	1,200.17
1888	8,241	9,959,207	119,649,064.98	119,743,345.25	946,961.12	355.44
1889	8,727	10,130,140	115,081,845.79	115,281,906.94	933,607.50	213.85
1890	9,382	10,624,727	114,362,757.12	114,347,631.35	950,755.57	538.06
1891	10,070	11,451,274	119,122,236.50	118,843,875.71	1,004,457.71	840.48
1892	12,069	12,069,442	120,066,801.07	120,121,754.19	1,036,074.98	952.47
1893	18,434	13,309,735	127,576,433.65	127,697,381.70	1,120,171.32	1,036.30
1894	19,264	14,304,041	138,793,579.49	138,725,229.29	1,210,582.16	1,756.03
1895	19,691	22,031,120	156,709,089.77	156,159,689.26	1,291,212.51	1,119.46
1896	20,802	23,962,053	172,100,649.02	171,475,476.35	1,410,077.76	1,389.09
1897	21,082	25,169,055	174,482,676.94	174,302,783.18	1,456,440.14	1,818.72
1898	23,421	27,798,078	191,354,121.63	190,678,429.08	1,599,736.09	822.04
1899	26,784	29,007,870	211,213,592.84	211,458,156.83	1,716,360.70	1,684.79
1900	29,649	32,060,983	238,921,009.67	238,022,043.78	1,914,712.52	750.08
1901	30,529	35,586,379	274,546,067.34	273,582,258.02	2,145,085.73	2,129.37
1902	31,680	40,474,327	313,551,279.88	315,220,488.68	2,453,223.08	5,474.44
1903	34,547	45,941,681	353,627,648.03	353,173,320.52	2,800,822.97	822.67
1904	35,094	50,392,554	378,778,488.84	378,511,407.13	3,039,440.34	1,165.69
1905	36,832	53,379,327	396,903,433.80	396,817,107.42	3,211,644.16	1,736.27
1906	37,444	58,461,353	444,515,790.60	442,338,675.28	3,557,180.86	1,088.83
1907	37,572	62,069,783	479,650,342.64	479,236,313.43	3,805,359.41	5,097.54
1908	43,313	64,864,570	498,699,637.49	494,971,500.91	3,949,001.88	2,429.10
1909	50,043	68,791,938	491,074,844.26	493,078,299.18	4,078,397.79	1,293.39
1910	51,791	76,918,036	547,993,641.53	545,632,105.97	4,557,607.64	1,648.46
1911	51,809	81,146,233	578,111,005.11	578,246,320.76	4,840,722.59	2,486.55
1912	52,815	84,539,212	583,337,003.96	584,358,032.94	4,967,746.84	1,781.69
1913	54,594	90,656,145	624,849,096.50	623,764,421.09	5,383,156.76	343.33
Total		1,165,942,905	9,581,764,890.23	9,570,332,211.83	78,519,948.25	56,459.17

[1] Prior to 1913 included with amount of fees for domestic orders.

Comparative statement relating to domestic money-order business.

	Year ended June 30—		Increase.
	1913	1912	
Orders issued:			
Number	90,656,145	84,539,212	6,116,933
Amount	$624,849,096.50	$583,337,003.96	$41,512,092.54
Orders paid and repaid:			
Number	90,755,281	84,391,517	6,363,764
Amount	$623,764,421.09	$584,358,032.94	$39,406,388.15
Excess of payments over issues:			
Number	99,136	147,695	246,831
Excess of issues over payments and repayments:			
Amount	$1,084,675.41	[1] $1,021,028.98	$2,105,704.39
Fees received	[2] $5,383,156.76	[2] $4,967,746.84	$415,409.92
Average amount of orders	[3] $6.89	[3] $6.90	[1] $0.01
Average amount of fees	[1] $0.0594	[2] $0.0582	$0.0012

[1] Decrease.
[2] Including fees for orders drawn on British Guiana, Canada, Canal Zone, Cuba, the Philippine Islands, and other countries with which business is transacted on the domestic basis.
[3] Not including orders drawn on countries named in footnote 2.

Comparative statement relating to international money-order business.

	Year ended June 30—		Increase.
	1913	1912	
Orders issued:			
Number	4,606,863	4,455,941	$150,922
Amount	$102,668,288.08	$97,660,024.52	$5,008,263.56
Orders paid and repaid:			
Number	2,563,439	2,273,007	290,432
Amount	$37,155,842.68	$32,631,902.71	$4,523,939.97
Excess of issues over payments:			
Number	2,043,424	2,182,934	[1] 139,510
Amount	$65,512,445.40	$65,028,121.81	$484,323.59
Fees received	[2] $1,295,607.36	[2] $1,235,481.86	$60,125.50
Average amount of orders	[3] $22.29	[3] $21.92	$0.37
Average amount of fees	[2] $0.2812	[2] $0.3331	[1] $0.0519

[1] Decrease.
[2] Not including fees for orders drawn on British Guiana, Canada, Canal Zone, Cuba, the Philippine Islands, and other countries with which business is transacted on the domestic basis.
[3] Including amounts of orders drawn on countries named in footnote 2.

Comparative statement of money-order transactions for the fiscal years 1912 and 1913.

	1913	1912	Increase.	
			Amount.	Per cent.
Fees received for domestic money orders issued [1]	$5,383,156.76	$4,967,746.84	$415,409.92	8.36
Fees received for international money orders issued [2]	1,295,607.36	1,235,481.86	60,125.50	4.87
Gain on exchange	394,942.12	334,188.03	60,754.09	21.17
Total revenue-producing operations	7,073,706.24	6,537,416.73	536,289.51	8.20
Number of domestic money orders issued	90,656,145	84,539,212	6,116,933	7.24
Number of domestic money orders paid and repaid [3]	90,755,281	84,391,517	6,363,764	7.53
Number of international money orders issued	4,606,863	4,455,941	150,922	3.39
Number of international money orders paid and repaid	2,563,439	2,273,007	290,432	12.78
Amount of domestic money orders issued	$624,849,096.50	$583,337,003.96	$41,512,092.54	7.11
Amount of domestic money orders paid and repaid	623,764,421.09	584,358,032.94	39,406,388.15	6.74
Amount of international money orders issued	102,668,288.08	97,660,024.52	5,008,263.56	5.13
Amount of international money orders paid and repaid	37,155,842.68	32,631,902.71	4,523,939.97	13.86
Foreign exchange received	13,483,263.90	11,306,971.91	2,176,291.99	19.25
Foreign exchange purchased	79,380,532.98	76,052,373.24	3,328,159.74	4.38
Total	1,481,301,445.23	1,385,346,309.28	95,955,135.95	69.19

[1] Including fees for orders drawn on British Guiana, Canada, Canal Zone, Cuba, the Philippine Islands, and other countries (23 in all) with which the international money-order business is transacted on the domestic basis; that is, the orders are issued on domestic forms and charged for at domestic rates.

[2] Not including fees for orders drawn on countries named in footnote 1.

[3] Repaid money orders are those drawn on other offices but paid by the office of issue; also orders drawn on the office of issue but paid to the remitter, who is not the payee, and also orders drawn on other than the office of issue and paid to the remitter.

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INTERNATIONAL MONEY-ORDER BUSINESS.

Nothing in the money-order system better deserves careful study than the international branch of the service. Beginning in 1869 with a single exchange, it now embraces more than 60 countries, including the Panama Canal Zone and the Philippines, each of which, enjoying a quasi-independence, maintains a postal organization separate and distinct from that of the mother country. Its operations touch every civilized quarter of the habitable globe in the distribution of its welcome missives. Under a low scale of fees the international service flourished and grew amazingly. In 1900 the total amount of orders issued for payment abroad was $16,749,018.31, in 1910, the total had grown to $99,742,686.24, an increase in a single decade of nearly 500 per cent.

Immigrants from foreign countries to the United States annually send millions of dollars to their native lands to aid their less fortunate relatives; other millions are remitted for deposit in savings banks. In an effort to divert into our own postal-savings banks the streams which are constantly flowing from the United States into the savings institutions of other countries, the scale of international fees was readjusted to take effect February 1, 1911. The charges on small orders were greatly increased, so that the heaviest burden of the higher rates fell upon those least able to bear it. The change caused many complaints to be addressed to the department by patrons of the system, some of whom suspected that they were being unfairly treated; and also gave rise to misunderstanding and dissatisfaction on the part of foreign postal administrations.

On the material side the records of the auditor show that during the fiscal year ended June 30, 1912, as compared with 1911, the receipts from fees for international orders increased by $146,029.22, while the aggregate amount of the orders decreased by $11,944,614.74. In the same year (1912) the total of domestic orders increased more than five millions. Although deposits in the savings banks may account for some part of the shrinkage, there is substantial and convincing evidence that the greater part, driven from post offices by the increased charges, drifted into private channels for remittance abroad. Notwithstanding the increase in fees, referred to elsewhere, the issues in 1913 amounted to $102,688,288.08. That sum was 5.13 per cent, or $5,008,263.56 greater than the total for 1912, but $6,916,351.18 less than the receipts for 1911.

A new schedule of fees is now being considered, which it is expected will restore the business temporarily lost.

PROPOSED EXTENSION OF INTERNATIONAL MONEY-ORDER BUSINESS.

During the year the postal administration of the United States of Colombia addressed the Postmaster General suggesting the desirability of a convention for the exchange of money orders between the respective countries. Correspondence with that end in view is now being conducted, and it is expected that a treaty will be concluded in the near future. Other South American countries with which we do not now exchange money orders are Argentina, Brazil, Dutch Guiana, Ecuador, French Guiana, Paraguay and Venezuela. With the growth of American interests in these countries and the increase of reciprocal commercial transactions, there is annually a greater demand for the facilities afforded by the exchange of money-orders. The immense expansion of commerce between the continents which may confidently be expected to follow the opening of the Panama Canal will create an imperative need for reciprocal money-order service, and in order that we may be prepared to satisfy that demand, letters have been addressed to the countries mentioned, suggesting money-order conventions.

FOREIGN EXCHANGE.

The indebtedness of the United States to foreign countries on money-order account is liquidated by bills of exchange which are purchased in New York. Purchases of specified amounts are made of the lowest bidder among more than 30 reliable banking houses which compete for the business. These transactions result in a profit to the department if the purchase is made at a lower rate than that fixed by the convention between the United States and the foreign country, while a loss is sustained if exchange is bought at a higher rate than that agreed upon in the convention as the conversion rate. During the year ended June 30, 1913, there was purchased $79,380,532. 98 in foreign exchange, on which there was a total gain of $398,302.76, from which should be deducted a loss of $3,360.64, leaving a net gain of $394,942.12, as compared with a net gain of $334,188.03 on purchases aggregating $76,052,373.24 in the previous fiscal year.

Bills of exchange are also used by foreign countries to pay balances against them on money-order account. The amount thus received during the year was $13,483,263.90, which exceeded by $2,176,291.99

that received during the year ended June 30, 1912. A considerable number of the bills received from foreign countries are drawn on London and are at once remitted to Great Britain to apply on money-order account. There is, of course, no gain on such transactions, nor is the amount of the bills included with foreign exchange purchased.

DIVISION OF CLASSIFICATION.

RECEIPTS FROM POSTAGE.

The receipts from postage paid on mail matter constitute the chief source of the postal revenues, amounting during the last fiscal year to $247,195,823.97, or 92.71 per cent of the total revenues, being $2.52 per capita.

PARCEL POST.

The establishment on January 1, 1913, of the Parcel Post System provided for by the act of August 24, 1912, constitutes by far the most important event of the year, marking an epoch in the history of the postal service. For many years there had been an urgent demand for a convenient and cheap means of transporting by mail small parcels of merchandise and products of the farm. Such a service is afforded by the Parcel Post System now in successful operation. The addition of this function has gone far toward bringing the postal service to that full measure of usefulness for which it is designed as the agent of the people. The service has been on trial in many ways and has not only proven that it was not intended to and would not injure business, but has in its infancy overcome much opposition and brought to its support practically all who had opposed it. It has come to the relief of the public in the transportation of small parcels, and its far-reaching benefits and possibilities are increasing daily.

The usefulness of the parcel post as a ready, cheap, and efficient means of transportation is realized by the public more and more each day. Its numerous features and advantages are being utilized in a surprisingly large number of ways, and there is almost no limit to the variety of articles transported. The consumer is placed in direct touch with the farmer and producer whose products can now be conveniently and quickly obtained at a very reasonable charge for transportation and handling, thereby assuring the freshest fruits, vegetables, eggs, butter, and other necessities for the lowest possible price and opening the way to the lowering of the high cost of living, which has caused so much concern in recent years. As a saver of time to those who in the past were compelled to leave their accustomed duties in order to get articles which now are brought to their doors by parcel post, the system has proven a boon indeed. The fact that the service is universal, extending to every city, town, and village of the United States and its possessions, and covering a field vastly greater than that of any other transportation agency, at once makes it the ideal system for carrying on the small commerce of the Nation. The usefulness of the system was greatly enlarged by the addition, on July 1, 1913, of a collect-on-delivery service, and it is now possible for one to send an article by parcel post for repairs and then have it returned, insured against loss, the charges for the repairs to be paid upon delivery of the article. Furthermore, by utilizing the special-delivery feature of the postal service the

forwarding and return of the article can be expedited to the fullest extent. The advantages and accomplishments of the parcel post have not only been direct, but indirect as well, for the competition created by it has caused other transportation agencies to increase their limits of free delivery in many districts, improve their service in other respects, and decrease their charges in many instances.

INCREASE OF WEIGHT LIMIT AND DECREASE OF RATES.

With the consent of the Interstate Commerce Commission a modification of the provisions of the parcel-post law was made effective on August 15, 1913, increasing the limit of weight and reducing the rates of postage applicable to parcels mailed for delivery within the first and second zones. Further changes become effective January 1, 1914.

Under the provisions of the order which went into effect on August 15, 1913, the maximum weight of parcel-post packages mailed for delivery in the first and second zones was increased from 11 to 20 pounds. The rate for local delivery was reduced from 5 cents for the first pound and 1 cent for each additional pound to 5 cents for the first pound and 1 cent for each additional 2 pounds. The rates for the first and second zones were reduced, respectively, from 5 cents for the first pound and 3 cents for each additional pound and 6 cents for the first pound and 4 cents for each additional pound to 5 cents for the first pound and 1 cent for each additional pound.

The order becoming effective January 1, 1914, increases the weight limit of parcels for delivery in the first and second zones from 20 to 50 pounds, and for delivery in all other zones from 11 to 20 pounds, and makes material reductions in the rates on parcels for the third, fourth, fifth and sixth zones. On and after March 16, 1914, the parcel post rates will apply to books weighing over 8 ounces.

Hundreds of communications from all over the country have been received expressing gratification at these changes and giving them the most hearty approval.

RATE SHEET.

In order to simplify the method of determining the parcel-post rates of postage a rate sheet has been provided for the respective units of area in which the 50 largest post offices are located. This sheet, which will eliminate the use of the map for such units, will be printed as one of the first pages of the Parcel Post Guide furnished for use in those units.

USE OF PRECANCELED POSTAGE STAMPS.

The use of precanceled postage stamps in payment of postage on matter of the third and fourth classes and on second-class matter mailed at the transient rate has been in vogue for a number of years, but such use was permitted only when the matter was presented for mailing in quantities of at least 2,000 identical pieces. This method of prepaying postage proved so advantageous from the standpoint of time and economy, to both the Government and the public, that the limitation as to quantity and identity of pieces mailable at one time was discontinued at the close of the fiscal year, and mailings of matter of the classes mentioned may now be made under precanceled stamps,

after authority therefor has been obtained from the department, regardless of the number of pieces presented at one time, or whether they are identical. The cancellation by hand of postage stamps affixed to mail is a slow process and these modifications have served greatly to facilitate such work, the use of precanceled stamps being particularly advantageous in the case of parcels of fourth-class matter which vary as to size, weight, and zone of delivery. It is believed that these modifications will result in a considerable saving to the postal service in the way of clerk hire during the current fiscal year.

SECOND-CLASS MAIL MATTER.

The relations between the department and publishers have been entirely harmonious during the year. The requirements of the law and postal regulations governing the transmission of newspapers, magazines, and other periodicals in the mails at the second-class rates of postage have been carefully observed by practically every publisher. The prosperity and growth of the publishing industry is amply demonstrated by the large increase in the mailings of second-class matter, the total weight of such mailings at the cent-a-pound and free-in-county rates, as shown in the statistics appearing elsewhere in this report, aggregating 1,057,607,512 pounds during the fiscal year. This is the largest amount in the history of the postal service, and it is the first time that the mailings for one year have exceeded a billion pounds. The immensity of these figures will be the better appreciated by expressing them in a more concrete way. For instance, the total mailings amounted to 528,803 tons, which, if placed in railway cars holding 20 tons each, would fill 26,440 cars and require 529 trains of 50 cars each to transport them. Again, based on the average number of pieces to the pound, the mailings during the year comprised more than 5,000,000,000 single copies, or approximately 50 copies for each man, woman, and child in the country. This does not take into consideration the enormous number of copies of daily newspapers which are circulated outside of the mails.

SEMIANNUAL STATEMENTS OF OWNERSHIP, CIRCULATION, ETC., OF PUBLICATIONS.

The constitutionality of the act of August 24, 1912, known as the publicity law, requiring second-class publications to file semiannual statements showing their ownership, management, circulation, etc., was upheld in a decision of the Supreme Court of the United States, rendered June 30, 1913. Immediately thereafter steps were taken to notify all publishers affected by the law, and its provisions are now being uniformly enforced by the department. The law provides that any publication failing to file and publish the required statement within 10 days after the receipt of a registered notice of such failure shall be denied the privileges of the mail as second-class matter. Now that the validity of the act has been sustained the publishers affected are manifesting a commendable willingness to comply with its requirements, and it has been necessary to revoke the second-class mailing privilege of only a small number of publications because of their failure to file and publish the required statements.

SUNDAY EDITIONS OF DAILY NEWSPAPERS MAILED TO CANADA.

Through an arrangement with the Canadian postal administration the rate of postage on copies of Sunday editions of daily newspapers mailed to subscribers in Canada has been modified so as to permit such copies, when addressed to persons who are also subscribers to the week-day editions, to be mailed at the cent-a-pound rate instead of at the rate of 1 cent for 4 ounces, as formerly. This has been the source of much gratification to the publishers of daily papers.

MAILINGS OF SECOND-CLASS PUBLICATIONS.

Table showing by States the number of publications of the various frequencies of issue and news agents mailing at the pound rate of postage, June 30, 1913.

State.	Daily.	Triweekly.	Semiweekly.	Weekly.	Semimonthly.	Monthly.	Bimonthly.	Quarterly.	Other periods.	Total.	News agents.
Alabama	28	....	4	206	10	39	5	22	2	316	14
Alaska	9	....	.....	20	.....	.....	.....	1	.....	30	10
Arizona	17	....	.....	54	2	7	.....	3	3	86	31
Arkansas	34	....	9	287	5	43	.....	13	2	393	14
California	166	2	43	617	17	213	15	30	13	1,116	338
Colorado	46	1	6	328	9	60	.....	7	5	462	64
Connecticut	36	....	9	92	3	52	6	13	6	217	96
Delaware	3	....	.....	28	.....	6	.....	3	.....	40	8
District of Columbia	6	....	.....	21	4	52	5	24	5	117	11
Florida	24	....	4	148	5	30	2	8	2	223	17
Georgia	28	2	13	273	11	86	.....	20	8	441	42
Hawaii	9	4	4	25	.....	13	.....	.....	.....	55	10
Idaho	11	....	7	143	2	11	.....	7	1	182	22
Illinois	183	3	42	1,116	63	564	16	123	10	2,120	91
Indiana	153	3	22	542	14	151	3	42	7	937	125
Iowa	73	3	31	805	26	120	13	36	21	1,128	37
Kansas	76	....	14	648	15	84	10	31	5	883	20
Kentucky	25	2	23	241	9	80	3	14	6	403	38
Louisiana	19	1	4	170	9	35	1	5	2	246	24
Maine	13	1	4	97	1	38	2	12	11	179	46
Maryland	19	1	2	116	6	41	5	28	4	222	55
Massachusetts	91	3	11	406	12	278	18	83	26	928	120
Michigan	88	4	27	547	7	164	3	22	8	870	87
Minnesota	42	1	9	631	22	119	5	34	4	867	26
Mississippi	16	....	7	183	16	40	1	9	1	273	5
Missouri	85	....	17	815	23	209	15	86	11	1,261	45
Montana	20	1	4	183	2	13	1	5	.....	229	30
Nebraska	37	2	15	571	19	86	5	24	4	763	13
Nevada	12	3	.....	34	.....	4	.....	1	2	56	13
New Hampshire	13	2	2	78	.....	22	4	10	5	136	39
New Jersey	54	....	4	295	5	106	4	20	8	496	49
New Mexico	5	....	3	121	2	14	.....	4	2	151	18
New York	216	5	47	1,182	109	924	39	155	61	2,738	303
North Carolina	31	....	27	212	22	84	2	37	4	419	18
North Dakota	14	....	.....	343	2	25	5	12	1	402	9
Ohio	173	5	52	768	31	307	16	117	13	1,482	163
Oklahoma	50	....	5	600	19	68	.....	17	.....	759	10
Oregon	37	....	22	224	6	63	.....	12	5	369	41
Pennsylvania	215	4	40	837	31	525	35	177	17	1,881	200
Porto Rico	19	1	2	21	10	8	1	1	2	65	1
Rhode Island	13	....	2	29	4	23	2	6	2	81	18
South Carolina	16	2	17	116	6	43	1	15	1	217	14
South Dakota	17	....	3	400	3	32	.....	14	4	473	10
Tennessee	18	....	4	233	11	90	6	65	4	431	36
Texas	103	....	23	908	22	135	6	25	8	1,230	35
Utah	5	2	6	76	.....	18	1	5	.....	113	18
Vermont	10	....	.....	80	1	20	3	9	7	130	18
Virginia	32	2	8	175	10	75	5	39	8	354	24
Washington	41	....	10	347	12	81	3	17	4	515	45
West Virginia	34	....	3	187	1	31	.....	8	7	271	26
Wisconsin	62	....	23	536	11	120	14	59	21	846	62
Wyoming	6	....	6	75	1	10	.....	2	.....	100	3
U. S. S. Colorado	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....
U. S. S. Dixie	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....
U. S. S. South Dakota	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....
United States postal agency, Shanghai, China	1	.....	.....	.....	.....	1	.....	.....	.....	2	.....
Total	2,554	60	640	17,190	631	5,466	281	1,532	353	28,707	2,612

Number of pounds of second-class matter mailed at the cent-a-pound and free-in-county rates during the fiscal year ended June 30, 1913.

State.	Subscribers' copies.		Sample copies at cent-a-pound rate.	Total at cent-a-pound rate.	Total mailings at cent-a-pound and free-in-county rates.
	Free in county.	At cent-a-pound rate.			
Alabama	561,268	5,908,202	68,664	5,976,866	6,538,134
Alaska	13,202	16,662	21	16,683	29,885
Arizona	137,014	484,619	4,848	489,467	626,481
Arkansas	562,817	3,152,098	13,724	3,165,822	3,728,639
California	2,039,030	25,602,968	130,849	25,733,817	27,772,847
Colorado	355,608	9,207,984	64,015	9,271,999	9,627,607
Connecticut	466,556	2,991,980	10,556	3,002,536	3,469,092
Delaware	107,503	316,882	860	317,742	425,245
District of Columbia		7,608,049	90,026	7,698,075	7,698,075
Florida	357,273	3,801,566	25,372	3,827,338	4,184,611
Georgia	602,994	16,861,339	228,156	17,089,495	17,692,489
Hawaii	74,311	325,037	50	325,087	399,398
Idaho	235,134	1,396,847	14,984	1,411,831	1,646,965
Illinois	4,993,685	115,294,995	1,874,948	117,169,943	122,163,628
Indiana	2,659,037	22,040,371	173,021	22,213,392	24,872,429
Iowa	3,905,628	30,620,477	639,446	31,259,923	35,165,551
Kansas	2,029,207	17,350,860	142,353	17,493,213	19,522,420
Kentucky	786,786	7,188,732	146,768	7,335,500	8,122,286
Louisiana	211,489	5,930,452	19,285	5,949,737	6,161,226
Maine	1,336,916	13,394,366	808,232	14,202,598	15,539,514
Maryland	556,452	7,277,023	72,708	7,349,731	7,906,183
Massachusetts	425,684	41,471,133	788,038	42,259,171	42,684,855
Michigan	3,963,013	22,977,198	190,999	23,168,197	27,131,210
Minnesota	1,988,690	37,335,697	472,518	37,808,215	39,796,905
Mississippi	337,294	1,000,690	6,909	1,007,599	1,344,893
Missouri	1,947,441	66,699,336	874,929	67,574,265	69,521,706
Montana	373,668	1,770,815	16,448	1,787,263	2,160,931
Nebraska	1,404,032	19,626,242	185,700	19,811,942	21,215,974
Nevada	49,785	340,346	2,209	342,555	392,340
New Hampshire	214,822	1,151,012	7,891	1,158,903	1,373,725
New Jersey	535,970	4,067,990	21,135	4,089,125	4,625,095
New Mexico	89,668	504,103	5,427	509,530	599,198
New York	5,652,438	222,993,622	2,484,577	225,478,199	231,130,637
North Carolina	774,551	4,941,061	45,760	4,986,821	5,761,372
North Dakota	619,202	1,873,672	21,450	1,895,122	2,514,324
Ohio	4,279,575	65,045,972	712,197	65,758,169	70,037,744
Oklahoma	1,001,175	5,379,982	49,657	5,429,639	6,430,814
Oregon	588,085	6,501,920	69,062	6,570,982	7,159,067
Pennsylvania	4,833,279	105,870,802	913,842	106,784,644	111,617,923
Porto Rico	216	535,037	39	535,076	535,292
Rhode Island	88,851	1,180,093	2,915	1,183,008	1,271,859
South Carolina	588,418	3,006,778	8,723	3,015,501	3,603,919
South Dakota	687,102	2,222,301	21,113	2,243,414	2,930,516
Tennessee	656,318	15,795,559	200,716	15,996,275	16,652,593
Texas	1,851,418	20,782,718	106,916	20,889,634	22,741,052
Utah	142,255	2,882,038	2,878	2,884,916	3,027,171
Vermont	483,553	1,652,927	5,832	1,658,759	2,142,312
Virginia	670,541	6,238,449	30,777	6,269,226	6,939,767
Washington	1,107,741	7,565,007	32,903	7,597,910	8,705,651
West Virginia	579,277	1,996,965	14,019	2,010,984	2,590,261
Wisconsin	1,991,625	14,938,966	237,384	15,176,350	17,167,975
Wyoming	142,875	333,178	8,609	341,787	484,662
U. S. S. Colorado		26	7	33	33
U. S. S. South Dakota		255		255	255
Shanghai, China		20,926	1,850	22,776	22,776
Total	60,060,472	985,474,725	12,072,315	997,547,040	1,057,607,512

Estimated weight of mailings of second-class matter at other than the cent-a-pound and free-in-county rates during the fiscal year 1913, based on the special weighing of mails in 1907:

	Pounds.
At transient second-class rate of 1 cent for each 4 ounces	33,164,069
At special rate of 1 cent a copy	1,922,224
At special rate of 2 cents a copy	3,929,879
Total	39,016,172

RECAPITULATION.

	Pounds.
Weight of mailings of second-class matter at the cent-a-pound and free-in-county rates	1,057,607,512
Weight of mailings at other rates	39,016,172
Aggregate weight of mailings of second-class matter	1,096,623,684

Comparative statement of second-class matter mailed at the cent-a-pound and free-in-county rates during the last five fiscal years.

Fiscal year.	Subscribers' copies.		Sample copies at cent-a-pound rate.	Total at cent-a-pound rate.	Total mailings at cent-a-pound and free-in-county rates.
	Free in county.	At cent-a-pound rate.			
	Pounds.	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*
1909	51,568,188	709,844,738	13,388,444	723,233,182	774,801,370
1910	55,639,177	805,077,852	12,695,048	817,772,900	873,412,077
1911	57,704,761	880,422,146	12,874,762	893,296,908	951,001,669
1912	58,017,631	927,260,451	12,679,904	939,940,355	997,957,986
1913	60,060,472	985,474,725	12,072,315	997,547,040	1,057,607,512

The increase in the mailings for 1913 over those for 1912 is 5.98 per cent.

The wonderful growth of the publishing industry is strikingly illustrated by comparing the mailings during 1903 with those of 1913, the amount during the latter year being almost double that of a decade ago, when the total mailings aggregated 545,843,846 pounds.

On June 30, 1913, there were 11,091 post offices at which publications were entered and mailed as second-class matter, and of the total postage at the cent-a-pound rate on such mailings, 79.91 per cent was collected at the 50 offices where the largest amount was mailed, and only 20.09 per cent at the other 11,041 offices. At New York City alone the collections amounted to 19.96 per cent of the whole, while at Chicago and Philadelphia 9.35 per cent and 8.18 per cent, respectively, were collected. At the 10 offices of New York, Chicago, Philadelphia, St. Louis, Boston, Kansas City, Minneapolis, Cincinnati, Des Moines, and St. Paul, the collections aggregated 53 per cent, or more than half of the total amount of postage derived from second-class matter.

APPLICATIONS RECEIVED.

The number of applications received for admission of publications to the second class of mail matter, for change in title, frequency of issue, or office of publication during the fiscal year was 4,459, of which 4,361 were favorably acted on, while 98 were denied. During the same period issuance of 3,798 publications having a second-class status was discontinued, leaving a net increase of 563 over the previous year in the number of publications passing in the mails at the second-class rates of postage. Permits to mail second-class publications at the rates applicable to second-class matter were issued to 207 news agents during the year.

INTERSTATE MAIL SHIPMENTS OF MEAT AND MEAT-FOOD PRODUCTS.

The act of June 30, 1906, prohibits the shipment from one State to another, or to any foreign country, of meat and meat-food products which are unwholesome or otherwise unfit for food. Prior to January 1, 1913, when the parcel-post rates became effective, the postage on meat and meat-food products was 1 cent an ounce, or 16 cents a pound. As that charge was prohibitive so far as meat is concerned, none was offered for mailing, and therefore there was no need for a postal regulation on the subject. However, with the establishment of the parcel post with its low postage rates and increased weight limit, the shipment of meat and meat-food products by mail became not only possible and profitable but highly desirable and convenient, and the necessity arose for suitable regulations governing the matter. These were promulgated on March 26, 1913, and provide that meat and meat-food products offered for transportation by mail in interstate shipment shall be accepted only when accompanied with a certificate showing that the products have been duly inspected or exempted from inspection in accordance with the provisions of the act of June 30, 1906, and the regulations of the Secretary of Agriculture prescribed in furtherance of that act. In no case, however, may fresh meats be mailed for delivery beyond the second zone. Experience has shown that the regulations operate in a very satisfactory manner and meet every condition.

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MAILINGS OF THIRD AND FOURTH CLASS MATTER WITHOUT STAMPS AFFIXED.

The act of April 28, 1904, authorizes the mailing of matter of the third and fourth classes, in quantities of not less than 2,000 identical pieces, without stamps affixed, the postage being paid in money. The popularity of this method of prepaying postage has continued, it resulting in great advantage to the postal service and the mailers from the standpoint of both time and economy. The number of pieces of such matter mailed in this manner, the amount of revenue collected thereon, and the increase, as compared with such mailings during the preceding year, are as follows:

	Pieces.	Revenue.	Increase over previous year.			
			Pieces.	Per cent.	Revenue.	Per cent.
Third class	405,753,436	$5,880,998.01	50,836,341	14.32	$641,859.81	12.25
Fourth class	12,369,848	163,762.24	940,821	8.23	871.39	.53
Total	418,123,284	6,044,760.25	51,777,162	14.13	642,731.20	11.90

EVASION OF THE PAYMENT OF POSTAGE.

During the fiscal year there arose 475 cases involving alleged violations of the act of March 4, 1909, making it an offense punishable by a fine of not more than $100 to conceal or inclose matter of a

higher class in that of a lower class for the purpose of evading payment of the higher postage rate properly chargeable, as compared with 483 cases during the previous year. Upon inquiry and investigation it developed that 451 of the apparent violations were not willful but due to inadvertence, while in 18 cases the mailers were unknown and could not be located. Six cases resulted in prosecutions, in three of which fines amounting to $15, $25, and $100, respectively, were imposed by the court; one case resulted in an acquittal, and in one a nolle prosequi was entered, while one is still pending.

ONE-CENT LETTER POSTAGE.

The movement for a reduction in the rate of postage on letters from 2 cents to 1 cent an ounce has continued. The reduction advocated is highly desirable in many respects, and while the enactment of legislation providing for 1-cent letter postage is favored as soon as it can be brought about without injury to, or impairment of, other postal facilities, and at the same time maintain the self-supporting basis of the service, the revenues of the department, as compared with the expenditures, do not justify such legislation at this time.

DIVISION OF STAMPS.

The principal functions of the Division of Stamps are to supervise the production, distribution, and redemption of postage, due and special-delivery stamps, postal cards, stamped envelopes, newspaper wrappers, international reply coupons, postal savings stamps and cards, and official stamps, postal cards and stamped envelopes; to examine, verify, and adjust the accounts of the contractors for these articles; to keep accounts of stamped paper issued to and redeemed from distributing subagents and postmasters; to examine and record the stamp reports of subagents and postmasters; to adjust cases involving the loss, miscarriage, or detention of stamped paper in transit; to pass upon cases relating to the counterfeiting or imitating of United States postage stamps, and the legitimacy of postmasters' stamp sales.

The sale of postage stamps and other stamped paper constitutes approximately 90 per cent of the revenues of the department. In the fiscal year 1913 sales to the public aggregated $239,993,518.12. This is an increase over sales of the fiscal year 1912 amounting to $18,488,943.18, which is the largest increase in the history of the department.

A statement of aggregate transactions in postage-stamped paper for the fiscal year 1913 follows:

Postage stamps and other stamped paper on hand in post offices July 1, 1912	$69,989,073.75
Stamped paper charged to postmasters	261,590,574.88
Stamped paper transferred from post offices	667,548.00
Excess stamped paper found in post offices	9,048.10
Increase in price of stamped envelopes on hand in post offices Dec. 31, 1911	1.58
Total	332,256,246.31

Sales of postmasters, July 1, 1912, to June 30, 1913 [1]	$239,993,518.12
Stamped paper redeemed by the department from postmasters	1,220,012.23
International reply coupons redeemed by the department	1,971.35
Dead-letter bills	22,623.07
Stamped paper transferred to post offices	669,352.03
Postage affixed to foreign registered mail	676.44
Decrease in price of stamped envelopes on hand in post offices Dec. 31, 1911	25.86
Stamped paper on hand in post offices June 30, 1913	90,348,067.21
Total	332,256,246.31

The aggregate number of stamps and other stamped paper issued by the department during the fiscal year 1913 was 13,589,416,425, an increase of 7.54 per cent over the issues of 1912. Details of these issues appear in the following tables:

Number of postage stamps, coiled stamps, stamp books, stamped envelopes, newspaper wrappers, postal cards, international reply coupons, postal-savings stamps, cards, and official stamps and stamped envelopes, and parcel-post stamps, by denominations, issued during the fiscal year ended June 30, 1913.

Adhesive postage stamps.	Ordinary.	Postage-due.	Panama-Pacific commemorative.	Parcel post.	Parcel-post due.
1-cent	3,517,425,900	8,271,700	116,380,829	181,302,389	4,750,604
1-cent, in coils	119,145,000				
1-cent, in stamp books	221,981,040				
2-cent	5,026,240,100	27,470,100	178,886,769	161,378,054	2,410,019
2-cent, in coils	308,119,500				
2-cent, in stamp books	299,580,600				
3-cent	61,265,600	824,300		19,558,799	
3-cent, in coils	1,227,000				
4-cent	91,351,400			65,894,219	
4-cent, in coils	1,054,000				
5-cent	103,354,500	1,869,800	7,442,279	94,300,019	4,583,204
5-cent, in coils	1,039,000				
6-cent	34,494,000				
8-cent	22,738,900				
10-cent	64,626,400	6,348,400	4,842,059	51,284,429	1,245,509
15-cent	14,237,120			17,105,444	
20-cent				14,261,264	
25-cent				17,788,589	893,789
30-cent		37,020			
50-cent	651,872	31,630		776,634	
75-cent				2,060,394	
1-dollar	131,811			478,434	
2-dollar	255				
5-dollar	3,134				
10-cent special-delivery	18,026,130				
10-cent registry	16,757,340				
Total	9,923,450,602	44,852,950	307,551,936	626,188,668	13,883,125
Value	$178,494,226.40	$1,412,099.00	$5,597,863.52	$30,383,824.70	$672,864.77

Stamp coils and stamp books.

Number of coils	766,030
Value	$7,510,595.07
Number of stamp books	26,958,110
Value	$8,481,003.50

[1] The sales reported by this office do not agree with those reported by the Auditor for the Post Office Department, principally because the auditor includes excess revenue gained in sales of stamped envelopes and newspaper wrappers singly and in odd quantities. This excess revenue is reported in postmasters' postal accounts directly to the auditor and not to this office. Another item consists of certain differences between the stamp and postal accounts which the auditor adjusts in the year following that in which they occur. A third item is the modifying of sales by the auditor in the case of credits to postmasters on account of losses by fire, burglary, and other casualties. Differences also exist because of adjustments made of delinquent stamp accounts.

Stamped envelopes and newspaper wrappers.

Denomination.	Ordinary envelopes and wrappers.	Return-card envelopes.	Total.
1-cent envelopes	169,776,525	84,182,456	193,958,981
2-cent envelopes	352,900,675	1,131,197,498	1,484,098,173
4-cent envelopes	344,750	567,500	912,250
5-cent envelopes	131,250	356,000	487,250
1-cent wrappers	40,788,986	.....	40,788,986
2-cent wrappers	4,484,500	.....	4,484,500
Total	508,426,686	1,216,303,454	1,724,730,140
Value	$9,227,680.03	$25,164,574.73	$34,392,254.76

Postal cards.

Denomination:	Number.
Nos. 2, 3, and 4, 1-cent	917,481,979
No. 5, 1-cent	3,998,500
No. 6, 1-cent double (reply)	24,597,000
E and No. 7, 2-cent (international)	749,600
F, 2-cent double (international reply)	17,600
K, 1-cent	17,000
Total	946,861,679
Value	$9,722,610.79

International reply coupons.

Denomination: 6-cent—	
Number	101,450
Value	$6,087

Postal-savings stamps and cards, and official stamps and stamped envelopes.

Denomination:	Number.
10-cent postal-savings stamps	65,800
10-cent postal-savings cards	20,400
1-cent postal-savings official stamps	179,250
2-cent postal-savings official stamps	476,950
10-cent postal-savings official stamps	386,950
50-cent postal-savings official stamps	8,225
1-dollar postal-savings official stamps	3,300
1-cent postal savings official envelopes	52,500
2-cent postal savings official envelopes	602,500
Total	1,795,875
Value	$78,634.00

Value of postage stamps, stamp books, stamped envelopes, newspaper wrappers, postal cards, international reply coupons, and postal-savings stamps, cards, and envelopes, issued in the fiscal year ended June 30, 1913, as compared with the issues of the fiscal year 1912.

Items.	Value.		Increase.	Per cent of increase.	
	1912	1913		1912	1913
Postage stamps	$164,192,305.96	$159,319,697.00	[1] $4,872,608.96	[1] 2.62	[1] 2.96
Stamps in coils	4,340,450.00	7,484,760.00	3,144,310.00	71.54	72.44
Stamps in books	7,888,142.88	8,211,422.40	323,279.52	14.77	4.09
Special-delivery stamps	1,519,637.80	1,802,613.00	282,975.20	[1] 1.14	18.62
Registry stamps	1,659,865.90	1,675,734.00	15,868.10	(2)	.95
Due stamps	1,241,166.99	1,412,099.00	170,932.01	[1] 11.72	13.77
Panama stamps	----------	5,597,863.52	5,597,863.52	----------	----------
Parcel-post stamps	----------	30,383,824.70	30,383,824.70	----------	----------
Parcel-post due stamps	----------	672,864.77	672,864.77	----------	----------
Return-card stamped envelopes	25,546,037.55	25,164,574.73	[1] 381,462.82	3.36	[1] 1.49
Ordinary stamped envelopes	7,652,316.80	8,695,171.32	1,042,854.52	[1] 10.67	13.62
Newspaper wrappers	506,460.92	532,508.71	26,047.79	[1] 6.85	5.14
Postal cards	9,326,562.40	9,722,610.79	396,048.39	[1] 6.72	4.24
International reply coupons	6,251.34	6,087.00	[1] 164.34	[1] 7.39	[1] 2.62
Total	223,879,198.54	260,681,830.94	36,802,632.40	[1] 1.02	16.43
Add stamp-books	257,369.46	269,581.10	12,211.64	[1] 3.67	4.74
Add stamp-coils	22,823.60	25,835.07	3,011.47	18.26	13.19
Total	224,159,391.60	260,977,247.11	36,817,855.51	[1] 1.02	16.42
Postal-savings stamps	2,775,510.00	6,580.00	[1] 2,768,930.00	508.66	[1] 99.76
Postal-savings cards	277,710.00	2,040.00	[1] 275,670.00	429.98	[1] 99.26
Total	3,053,220.00	8,620.00	[1] 3,044,600.00	500.55	[1] 99.71
Postal-savings official stamps	317,567.50	57,439.00	[1] 260,128.50	786.61	[1] 81.91
Postal-savings official envelopes	63,525.00	12,575.00	[1] 50,950.00	437.43	[1] 80.20
Total	381,092.50	70,014.00	[1] 311,078.50	699.97	[1] 81.62
Grand total	227,593,704.10	261,055,881.11	33,462,177.01	.25	14.70

[1] Decrease. [2] No issue in previous year.

REQUISITIONS FILLED.

For the first time in the history of the Division of Stamps requisitions crossed the million mark, the total number filled being 1,056,395, an increase of 136,456, or 14.83 per cent, over 1912. This very large increase is due principally to the issuance of the new distinctive parcel-post and parcel-post due stamps, for which 141,013 requisitions were filled. The average number of requisitions filled daily was 3,464.

COILED STAMPS.

The coils of 500 and 1,000 stamps continue to grow in popular demand. The issues increased by 306,826 in 1913 over 1912, or 66 per cent. The current 5-cent stamp has been added to the list of stamps in coils, perforated and coiled sidewise.

STAMP BOOKS.

The revenue upon the stamp books issued during the year, derived from the 1 cent charged for each book above the value of the stamps contained therein, aggregated $269,581.10. Cost of manufacture was $77,056.34, leaving $192,524.76 to defray cost of distribution.

IMPROVEMENTS IN STAMP BOOKS.

The stamp books have proved so popular with the public and so advantageous to the department that it has been regarded advisable to improve them. Accordingly a better quality of paper board has been adopted for the covers and the cover designs have been made more attractive.

Action has also been taken to issue two new stamp books, one containing twenty-four 1-cent and twenty-four 2-cent stamps, to sell for 73 cents, and the other containing ninety-six 1-cent stamps, to sell for 97 cents. The twenty-four 1-cent:2-cent book was placed on sale October 25, 1913, and the ninety-six 1-cent book will be issued shortly.

COMMEMORATIVE STAMPS.

The series of four postage stamps described in the last annual report of this office, issued to commemorate the opening of the Panama Canal and the discovery of the Pacific Ocean, was placed on sale January 1, 1913, except the 2-cent denomination, which was first issued January 18, 1913.

A model of the Pedro Miguel Locks was used as the subject of the 2-cent denomination, and the title was first erroneously engraved "Gatun Locks," but the mistake was discovered before any of the stamps were issued, and all of those which had been printed were destroyed by burning. The title was reengraved as "Panama Canal," and the stamps are being issued with that title.

The first print of the 10-cent denomination was found to be of too light a shade, and in response to a request of this department dated April 9, 1913, the Bureau of Engraving and Printing adopted a darker shade of ink. These darker stamps were first issued by the department August 25, 1913.

PARCEL-POST STAMPS.

Under the law quoted in the report of this office for 1912, the department prepared a set of 12 parcel-post stamps and a set of 5 parcel-post due stamps of distinctive designs. The designs were prepared in three groups of 4 stamps each; the working personnel of the postal service being represented by the first group, the transportation of the mail by the second group, and the manufacturing and agricultural interests of the country by the third group. Descriptions, with dates of initial sale of the several denominations, follow:

The parcel-post stamps measure 1 by 1½ inches between perforation lines. The color is red for all denominations. In a curved panel across the top, supported by a paneled perpendicular column at each end, appear the words "U. S. Parcel Post" in Roman capital letters. Triangular ornaments occupy both upper corners. The denomination in large numerals is in each lower corner, with the title of the subject and the word "Cents" (or "Dollar") between. The subjects of the several denominations are:

	Date of issue.
1-cent: Post-office clerk	Nov. 27, 1912
2-cent: City carrier	Do.
3-cent: Railway postal clerk	Apr. 5, 1913
4-cent: Rural carrier	Dec. 12, 1912
5-cent: Mail train	Nov. 27, 1912

	Date of issue.
10-cent: Steamship and mail tender	Dec. 9, 1912
15-cent: Automobile service	Dec. 16, 1912
20-cent: Aeroplane carrying mail	Do.
25-cent: Manufacturing	Nov. 27, 1912
50-cent: Dairying	Mar. 15, 1913
75-cent: Harvesting	Dec. 18, 1912
$1: Fruit growing	Jan. 3, 1913

The parcel-post due stamps are 1 by 1½ inches between perforation lines. The color is green for all denominations. In a horizontal panel across the top are the words "U. S. Parcel Post," and in a similar panel at the bottom, "Postage due," in Roman capital letters. In the center, upon a background of lathework, and within a circular frame, is a large numeral expressing the denomination. The upper half of the circular frame carries the denomination in words which are repeated in the lower half, except that the words expressing the denomination appear but once upon the 25-cent stamp. Small numerals of denomination are on both sides of the large central numeral. The denominations are 1, 2, 5, 10, and 25 cent.

The labor of issuing the new stamps to all the post offices of the country in time for the inauguration of the parcel-post law on January 1, 1913, was extremely heavy, but it was accomplished by the Division of Stamps without increase of clerical force.

While the parcel-post stamps were of appropriate designs and sufficiently distinctive to identify at a glance mail to which they were affixed as parcel-post matter, objections to them began to develop from the outset. All denominations were printed in the red color which to some extent had become identified with the postal service, and this uniformity of color caused a confusing of denominations which the large numerals failed to prevent. Another objection was the size of the stamp, which was too large for small parcels and labels, particularly when more than one stamp was required for postage. The issuing of the stamps in sheets of 45, made necessary by the size of the stamps, was troublesome to the department, to postmasters and their employees, and to the public, because of the difficulty experienced in counting and computing multiples of 45 as compared with the sheets of 100, to which the postal service and the public are accustomed.

The objections to the stamps led to steps to reduce the size and change the designs and color scheme. March 21 the Postmaster General approved a design for a new parcel-post stamp, which was of the same size and shape as the ordinary postage stamp but with the long dimension horizontal instead of vertical, and having a large numeral expressing the denomination in the center in place of the usual picture. The colors were to correspond with those of the ordinary stamps of similar denominations.

Before any of the new stamps were printed, however, the department gave consideration to the question of whether the distinctive parcel-post stamps could not be discontinued entirely. These stamps served but one useful purpose, i. e., to indicate the parcel-post revenue, and this object, it was held, could be accomplished with sufficient accuracy for all practical purposes by means of test counts of the postage on parcels mailed for a given period of time. The distinctive stamps were expensive for cost of production, handling, and accounting, and were a source of serious embarrassment and vexation to the public as well as to the postal service. These disadvantages far outweighed the single advantage possessed by the stamps as a medium of revenue statistics. The ordinary stamp should be sufficiently

elastic for every postage purpose (except payment of postage due), so that it can be used for prepayment of postage on all classes of mail, special-delivery service, and registry, insurance, and C. O. D. fees. Such a broad usefulness saves the public and the postal service the inconvenience and annoyance involved in the restricted validity of special stamps, and simplifies and facilitates public patronage of the service.

The parcel-post law provided for the use of distinctive stamps on fourth-class mail, but it also authorized the Postmaster General, with the consent of the Interstate Commerce Commission, to reform the conditions of mailability for the purpose of promoting the service to the public. Under this latter provision the Postmaster General, with the approval of the Interstate Commerce Commission, in order No. 7241 of June 26, 1913, effective July 1, 1913, directed that ordinary postage stamps should be valid for postage, insurance, and C. O. D. fees on parcels, and that distinctive parcel-post stamps should be valid for all purposes for which ordinary stamps are valid; also that the regular issue of due stamps and the distinctive parcel-post due stamps should be valid for the collection of unpaid and short-paid postage on all classes of mail. It was further ordered that the issuance of distinctive parcel-post stamps and parcel-post due stamps be discontinued after the existing stocks were exhausted and that no additional supplies should be printed.

The sales of parcel-post stamps and parcel-post due stamps by postmasters in the fiscal year 1913 aggregated $13,744,593.88.

NEW DENOMINATIONS OF STAMPS.

The discontinuance of distinctive parcel-post stamps makes it necessary to issue several new denominations of ordinary stamps to take their place, and preparation is now being made for such new stamps.

DISCONTINUANCE OF REGISTRY STAMPS.

To aid in distinguishing registered mail from other mail the department has been issuing a 10-cent registry stamp of distinctive design for prepayment of registry fees. Such a stamp is not required by law; it was issued by Executive order. Experience has shown the slight advantage of the stamp to be outweighed by the confusion arising from its attempted use for prepayment of postage by persons unfamiliar with its true function. Moreover, ordinary stamps are valid for payment of registry fees, so that the registry stamp is not essential. Upon the recommendation of this office, therefore, the Postmaster General, in Order No. 7136 of May 28, 1913, directed the discontinuance of the issuance of the registry stamps when the manufactured supply on hand shall have become exhausted. They will continue, however, to be valid for registry fees so long as any of the stamps remain unused. The order also provided for delivery, without charging postage due, of registered mail inadvertently dispatched under registry stamps in lieu of postage, and for collection of deficient postage at the single rate only when registry stamps so used do not represent full postage in addition to registry fee. The registry stamp is thus given a restricted postage validity.

STAMPED ENVELOPES.

The total number of stamped envelopes and newspaper wrappers issued to postmasters in the fiscal year 1913 was 1,724,730,140. Of these, 1,216,303,454, or 70.52 per cent, bore printed return cards, while 508,426,686, or 29.48 per cent, were unprinted.

The gross selling value of stamped envelopes and newspaper wrappers issued was $34,392,254.76, and their postage value was $32,179,985.63, leaving $2,212,269.13 to defray cost of manufacture and distribution. The contract cost was $1,416,022.74, leaving $796,246.39 for cost of distribution.

EXCESS REVENUE FROM STAMPED ENVELOPES.

In selling stamped envelopes and newspaper wrappers singly and in odd lots a fraction of a cent is gained over the rate per thousand. The revenue to the department from this source in the fiscal year 1913, as reported by the Auditor for the Post Office Department, aggregated $123,146.24, compared with $127,341.11 in 1912.

WINDOW ENVELOPES.

Window envelopes are envelopes having an opening or a transparent panel in the front, through which the address upon the inclosure is disclosed. These envelopes have met much opposition on the part of post-office and railway-mail employees because of difficulty experienced in deciphering addresses, leading to demands that the envelopes be barred from the mails. They possess merit, however, chiefly in that addressing is eliminated, and the advantages to the business public undoubtedly outweigh their disadvantage to the postal service. Much of the objection to window envelopes arises from improper folding of inclosures and illegible addressing, and believing that these difficulties could be minimized by regulation, Order No. 7303 was issued by the Postmaster General July 10, 1912, prescribing the position of the window in the envelope, prohibiting the use of colored windows and requiring them to be as transparent as possible, requiring the use of return cards, and directing that if inclosures are not folded to fit the envelope properly, or if the address is illegible, the envelope shall be laid aside for treatment after disposition shall have been made of other mail. These regulations should result in a marked improvement in the manner of using window envelopes, and have already led to improvement of the envelopes themselves by manufacturers.

NEW POSTAL CARDS.

The new No. 4 1-cent card mentioned in the annual report for 1912 was not issued, but in its place the Postmaster General has approved the preparation of a design containing the portrait of Thomas Jefferson, and the engraving is now under way. The card will be printed in green ink.

INK FOR NO. 5 POSTAL CARD.

The No. 5 1-cent card is now printed in green ink instead of red, which considerably improves it and conforms to the color scheme recommended by the Universal Postal Union Convention. It was first placed on sale July 29, 1913.

NEW POSTAL SAVINGS OFFICIAL POSTAL CARD.

A 1-cent official postal card has been adopted for postal savings correspondence. It is described as follows:

The size is 3 by 5 inches; color of card, cream; color of ink, black. The stamp is a circle about seven-eighths inch in diameter. A large white numeral 1 appears in the center upon a background of lathe work. Under the numeral is the word "cent" in white capital letters. In a black border are the words, in white capital letters, "U. S. postal savings" and "official mail." To the left of the stamp are the words "post card," in Gothic capitals.

EXCHANGE OF STAMPED ENVELOPES AND POSTAL CARDS WITH THE PHILIPPINE ISLANDS.

A joint order was issued May 28 by the Secretary of War and the Postmaster General, effective July 1, 1913, making embossed stamped envelopes and single 1-cent postal cards of the United States valid for postage in the Philippine Islands when directed to addresses in the United States; and making stamped envelopes and 1-cent single postal cards of the Philippine Islands valid in this country when addressed to the Philippine Islands. The purpose of this order was to provide a means of sending stamped envelopes and postal cards for reply postage from the United States to the Philippine Islands and vice versa.

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STOCKS OF STAMP SUPPLIES.

On June 30, 1913, the Government's stocks of postage stamped paper available for issue at distributing agencies and subagencies were as follows:

Adhesive stamps	1,323,199,508
Stamped envelopes	242,819,298
Newspaper wrappers	30,978,250
Postal cards	225,093,750

CONSOLIDATION OF DIVISIONS OF STAMPS AND REDEMPTION.

By the Postmaster General's Order No. 7037 of April 30, 1913, effective May 1, 1913, the Division of Redemption was abolished, and its functions and duties were transferred to and combined with those of the Division of Stamps. This makes the clerical force more elastic, so that employees can be detailed to and from the different sections of the consolidated division, as the conditions of work make it advis-

able, with much greater facility than under the divided organization. An inventory was taken of stamped paper on hand on the date of consolidation.

REDEMPTION OF STAMPED PAPER.

The operations of the redemption section in the fiscal year 1913 are exhibited in the following statement:

	Number of cases.	Amount.
Postage stamped paper (except international reply coupons) redeemed from postmasters	18,416	$1,236,640.96
International reply coupons	782	1,971.25
Stamped paper redeemed from distributing subagencies	8	16,622.56
Postal savings stamps	50	3,423.60
Serviceable stamped paper returned to postmasters or transferred to other postmasters	139	14,908.07
Rejected	548	3,640.20
Canceled stamps for postage at the third-class rate collected on periodicals denied entry at the second-class rate	376	14,159.04
Canceled stamps representing official paid registry fees on mail from assistant treasurers to the Treasurer of the United States	387	16,420.17
Canceled due stamps representing postage due collected by postmasters whose due stamps were exhausted	80	150.99
Stamped paper received from chief inspector and other officers of the department	141	1,809.00
Conscience contributions in stamps	22	26.19
Stamped paper received from unidentified sources	20	165.82
Money	9	89.25
Total	20,978	1,310,027.10

The total number of cases received and disposed of, 20,978, was an increase of 216 over the fiscal year 1912. The total amount involved, $1,310,027.10, was an increase of $272,958.75, or 26.3 per cent.

LIST OF IMPROVEMENTS.

The following improvements have been inaugurated in connection with the division of stamps:

1. The division of redemption has been consolidated with it.
2. Action has been taken to improve the accounting methods of the redemption section.
3. A new method of preparing redemption certificates has been adopted, by which the writing of the certificates furnished to postmasters and to the auditor, together with the office record, is consolidated by manifolding.
4. Window envelopes have been adopted for the mailing of redemption certificates to postmasters, saving the addressing of the envelopes.
5. A needed regulation of window envelopes in the mails has been accomplished.
6. The itemized receipts, numbering a half million yearly, heretofore required of postmasters for stamp supplies issued to them, have been discontinued, a list of invoices prepared by postmasters on their quarterly stamp accounts taking the place of the receipts. This change saves the cost of printing the receipt blanks, of preparing the receipts, and of handling them when returned to the department.

7. Postmasters at the larger cities are required to write the department's order on the stamped-envelope contractor for printed envelopes, in lieu of separate requisitions. This saves the labor of writing the order in the department, without additional work to postmasters.

8. The use of official post cards for requisition blanks has been authorized, saving the cost of envelopes and the labor of opening the envelopes and removing and unfolding the requisitions.

9. Post-card invoices for postal-card and stamped-envelope invoices have been authorized, saving the cost of envelopes, and the labor of addressing, inclosing, and sealing them.

10. Two new stamp books have been authorized, one to contain ninety-six 1-cent stamps, the other twenty-four each of 1-cent and 2-cent stamps.

11. The covers of stamp books have been improved in quality and design.

12. The design of the No. 4 1-cent postal card has been improved.

13. The No. 5 1-cent postal card has been improved by printing it in green instead of red ink.

14. The color of the 10-cent Panama-Pacific commemorative postage stamp has been improved.

15. The distinctive parcel-post stamps have been discontinued.

16. The distinctive registry stamp has been discontinued.

17. A mutual exchange with the Philippine Islands of postal cards and stamped envelopes for reply postage has been effected.

18. A postal card has been produced for official mailings of the Division of Postal Savings.

The greater number of improvements in the foregoing list originated or were executed within the Division of Stamps, and the others were developed in connection with other divisions.

DIVISION OF REGISTERED MAILS.

The Division of Registered Mails is charged with the management of the registered mail service, and the insurance and collect-on-delivery features of the domestic parcel post, comprising the correction of irregularities, the collecting and recording of statistics, the authorization of specially devised forms, the installation of distinctive office systems, the instruction of postmasters and the furnishing of information and decisions on questions relative to these services, the establishment and control of all rotary-locked, brass-locked, and lead-sealed exchanges and dispatches of registered mail, and the consideration of all claims for indemnity for lost registered, insured, and collect-on-delivery matter.

GROWTH OF THE REGISTRY SYSTEM.

The growth of the registry system since 1876, prior to which no statistics were regularly compiled in annual reports, is shown in the following table:

Years.	Number of post offices.	Number of registrations.			Total paid and free.	Fees received.
		Paid.		Free.		
		Domestic.	Foreign.			
1876	36,383	3,198,931	155,235	653,651	4,007,817	$335,416.60
1877	37,345	3,528,480	145,908	673,739	4,348,127	367,438.80
1878	39,258	3,996,001	153,993	748,810	4,898,804	414,999.40
1879	40,855	4,430,576	166,781	831,665	5,429,022	459,735.70
1880	42,989	5,699,774	257,969	1,038,770	6,996,513	595,774.30
1881	44,512	6,804,510	324,312	1,210,096	8,338,918	712,882.20
1882	46,231	7,999,597	415,382	1,212,943	9,627,922	841,497.90
1883	47,863	8,797,902	467,595	1,329,219	10,594,716	926,549.70
1884	50,017	9,074,203	496,390	1,675,952	11,246,545	957,059.30
1885	51,252	8,777,370	511,614	1,754,272	11,043,256	928,898.40
1886	53.614	9,153,907	545,620	1,948,700	11,648,227	969,952.70
1887	55,157	9,737,139	609,629	2,177,653	12,524,421	1,034,676.80
1888	57,376	10,531,986	719,558	2,425,625	13,677,169	1,125,154.40
1889	58,999	10,773,199	737,626	2,551,041	14,061,866	1,151,082.50
1890	62,401	11,365,652	798,517	2,782,912	14,947,081	1,216,416.90
1891	64,329	11,509,246	879,821	2,658,535	15,047,602	1,238,906.70
1892	67,119	11,612,032	931,978	2,716,084	15,260,094	1,254,401.00
1893	68,403	11,774,360	1,028,034	2,759,016	15,561,410	1,150,790.16
1894	69,805	11,512,186	949,252	2,589,116	15,050,554	996,915.04
1895	70,064	10,828,187	916,338	2,683,556	14,428,081	939,562.00
1896	70,360	11,154,855	1,037,506	2,913,975	15,106,336	975,388.88
1897	71,022	10,669,773	1,020,633	2,868,677	14,559,083	935,232.48
1898	73,570	11,420,990	1,056,508	3,122,722	15,600,220	998,199.84
1899	75,000	12,238,584	1,172,500	2,674,938	16,086,022	1,072,886.72
1900	76,688	13,936,388	1,456,548	3,029,713	18,422,649	1,231,434.88
1901	76,945	15,957,126	1,660,152	3,197,223	20,814,501	1,409,382.24
1902	75,924	17,636,071	1,992,072	3,203,257	22,831,400	1,570,251.44
1903	74,169	19,940,205	2,449,148	3,561,825	25,951,178	1,791,148.24
1904	71,131	21,601,667	2,794,070	3,818,133	28,213,870	1,951,658.96
1905	68,131	23,324,040	3,014,115	3,862,022	30,200,177	2,107,052.40
1906	65,600	26,343,453	3,606,458	4,215,873	34,165,484	2,395,992.88
1907	62,659	29,749,206	4,281,373	4,225,070	38,255,649	2,722,446.32
1908	61,158	31,712,794	4,411,116	4,027,887	40,151,797	2,889,912.80
1909	60,144	32,707,224	4,199,623	3,632,698	40,539,545	2,952,547.76
1910	59,580	33,682,081	4,782,199	3,589,294	42,053,574	3,593,946.36
1911	59,237	33,642,296	5,000,894	4,123,269	42,766,459	3,864,319.00
1912	58,729	33,211,335	4,702,399	4,321,266	42,235,000	3,791,373.40
1913	58,020	31,935,552	5,112,750	5,034,656	42,082,958	3,704,830.20

The number of pieces of mail registered and insured in the postal service of the United States during the fiscal year ended June 30, 1913, is shown by classes of post offices in the following statement:

	Offices of first class.[1]	Offices of second class.	Offices of third class.	Offices of fourth class.[2]	Total.
REGISTERED.					
Paid registrations:					
Domestic letters	15,241,403	3,441,144	2,723,192	5,221,950	26,627,689
Domestic parcels	3,262,304	640,555	452,081	484,604	4,839,544
Foreign letters	3,110,311	484,086	346,060	363,341	4,303,798
Foreign parcels	712,916	47,740	20,984	27,312	808,952
Official paid [3]	132,355	59,833	47,169	57,531	296,888
Official paid (special) [4]	171,431				171,431
Total paid registrations	22,630,720	4,673,358	3,589,486	6,154,738	37,048,302
Official free, exclusive of postal-savings business	3,144,108	237,170	226,973	1,034,243	4,642,494
Official free, on postal-savings business only	102,357	15,567	27,489	95,515	240,928
Official free (special) [5]	151,234				151,234
Total free registrations	3,397,699	252,737	254,462	1,129,758	5,034,656
otal number of letters and parcels registered, paid and free	26,028,419	4,926,095	3,843,945	7,284,496	42,082,958
Distribution, reregistered free, exclusive of postal-savings business [6]	1,115,352	160,196	105,402	18,900	1,399,850
Distribution, reregistered free, on postal-savings business only [6]	278	1,151	2,341	2,594	6,364
Total distribution, reregistered free	1,115,630	161,347	107,743	21,494	1,406,214
Total free and distribution, reregistered free	4,513,329	414,084	362,205	1,151,252	6,440,870
Aggregate number of letters and parcels registered, paid, official free, and distribution free	27,144,049	5,087,442	3,951,691	7,305,990	43,489,172
Amount collected for registry fees	$2,263,072.00	$467,335.80	$358,948.60	$615,473.80	$3,704,830.20
INSURED.[7]					
Fourth-class (domestic parcel post)	1,533,774	410,478	321,373	329,560	2,595,185
Amount collected for insurance fees	$153,377.40	$41,047.80	$32,137.30	$32,956.00	$259,518.50

[1] In the column "Offices of first class" is included matter registered at the United States Postal Agency at Shanghai, China.

[2] In the column "Offices of fourth class" is included matter registered by Navy mail clerks on board United States naval vessels and by sea post clerks.

[3] The item "Official paid" represents official matter mailed free of postage, but on which the registry fee was paid. In previous reports this item was included in the paid matter registered for the public.

[4] The item "Official paid (special)" represents official matter sent direct in through pouches by the Treasury Department branches free of postage, but for which the registry fee was paid, and consists of 5,144 domestic letters and 166,287 domestic parcels.

[5] The item "Official free (special)" represents registered mail sent direct in through pouches by the Treasury and Navy Departments.

[6] Under the heading "Distribution reregistered free" is included matter which was reregistered free when "Forwarded," "Missent," "Returned to writer" or sent to the Fourth Assistant Postmaster General, Division of Dead Letters, whether or not the registry fee was originally paid.

[7] The item "Insured" covers a period of six months only beginning Jan. 1, 1913 (the date of the inauguration of the domestic parcel post), and ending June 30, 1913.

The percentage of pieces of mail registered and insured at the several classes of post offices to the entire number registered and insured throughout the country is shown in the following statement.

	Offices of first class.	Offices of second class.	Offices of third class.	Offices of fourth class.
REGISTERED.				
Paid registrations:	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Domestic letters	57.24	12.92	10.23	19.61
Domestic parcels	67.41	13.23	9.35	10.01
Foreign letters	72.27	11.25	8.04	8.44
Foreign parcels	88.13	5.90	2.59	3.38
Official paid	44.58	20.15	15.89	19.38
Official paid (special)	100.00			
Total paid registrations	61.08	12.62	9.69	16.61
Official free, exclusive of postal-savings business	67.72	5.11	4.89	22.28
Official free, on postal-savings business only	42.48	6.46	11.41	39.65
Official free (special)	100.00			
Total free registrations	67.49	5.02	5.05	22.44
Total number of letters and parcels registered, paid and free	61.85	11.70	9.13	17.32
Distribution reregistered free, exclusive of postal-savings business	79.67	11.46	7.51	1.36
Distribution reregistered free, on postal-savings business only	4.37	18.08	36.79	40.76
Total distribution reregistered free	79.34	11.47	7.66	1.53
Total free and distribution reregistered free	70.07	6.43	5.62	17.88
Aggregate number of letters and parcels registered, paid, official free, and distribution free	62.42	11.70	9.09	16.79
Amount collected for registry fees	61.08	12.62	9.69	16.61
INSURED.				
Fourth class (domestic parcel post)	59.10	15.82	12.38	12.70
Amount collected for insurance fees	59.10	15.82	12.38	12.70

The increase or decrease, by items and classes of post offices, in the registrations for the fiscal year ended June 30, 1913, compared with the preceding fiscal year, is shown in the following statement:

	Increase.					
	Offices of first class.	Offices of second class.	Offices of third class.	Offices of fourth class.	Total.	Per cent.
Paid registrations:						
Domestic letters	752,001	63,966	79,338	[1] 29,254	866,051	3.36
Domestic parcels	[1] 1,742,565	[1] 315,881	[1] 227,518	[1] 169,622	[1] 2,455,586	[1] 33.66
Foreign letters	302,167	37,448	28,108	11,438	379,161	8.81
Foreign parcels	47,629	[1] 2,195	[1] 8,389	[1] 5,855	31,190	4.01
Official paid	132,355	59,833	47,169	57,531	296,888	New.
Official paid (special)	16,864				16,864	10.91
Total paid registrations	[1] 491,549	[1] 156,829	[1] 81,292	[1] 135,762	[1] 865,432	[1] 2.29
Official free, exclusive of postal savings business	530,118	12,533	[1] 10	3,866	546,507	13.34
Official free, on postal savings business only	50,274	15	15,872	95,211	161,372	202.84
Official free (special)	5,511				5,511	3.71
Total free registrations	585,903	12,548	15,862	99,077	713,390	16.51
Total number of letters and parcels registered, paid and free	94,354	[1] 144,281	[1] 65,430	[1] 36,685	[1] 152,042	[1] .36
Distribution reregistered free, exclusive of postal savings business	104,326	[1] 5,733	[1] 3,511	[1] 80,354	14,728	1.06
Distribution reregistered free on postal savings business only	272	801	2,325	2,590	5,988	1,592.55
Total distribution reregistered free	104,598	[1] 4,932	[1] 1,186	[1] 77,764	20,716	.36
Total free and distribution reregistered free	690,501	7,616	14,676	21,313	734,106	12.86
Aggregate number of letters and parcels registered, paid, official free, and distribution free	198,952	[1] 149,213	[1] 66,616	[1] 114,449	[1] 131,326	[1] .31
Amount collected for registry fees	[1] $49,154.90	[1] $15,682.90	[1] $8,129.20	[1] $13,576.20	[1] $86,543.20	[1] 2.29

[1] Decrease.

PAID REGISTRATIONS—INSURED MAIL.

There was a decrease of 865,432 paid registrations during the fiscal year 1913 compared with the preceding year, due to the elimination of fourth-class (domestic parcel-post) matter from the registered mails during a period of six months of the fiscal year from January 1 to June 30, 1913. If domestic fourth-class matter had not been prohibited registration and the 2,595,185 pieces which were insured during the six months named had been registered, there would have been an increase in the number of domestic parcels registered of 139,599 pieces and a total increase in the number of paid registrations in the entire country for the fiscal year 1913 of 1,729,753 pieces, or 4.56 per cent.

FREE REGISTRATIONS.

Although the paid registrations during the year decreased by 865,432 pieces, or 2.29 per cent, the free registrations increased by 713,390 pieces, or 16.51 per cent. There were 5,034,656 pieces registered free during the year, which was 11.96 per cent of the total registrations paid and free.

The free registrations at the post office at Washington, D. C., during the year numbered 683,354, or 13.57 per cent of the total free registrations. However, 151,234 registered pieces were sent free in direct pouches by the Treasury and Navy Departments, which would otherwise have been registered at the post office at Washington, D. C., and which, if added to the number of free registrations at that office, would amount to 834,588 free registrations originating in Washington, D. C., or 16.58 per cent of the total free registrations of the country.

There were 240,928 pieces registered free on postal savings business exclusively, or 4.78 per cent of the total free registrations.

REGISTERED AND INSURED MAIL AT THE 60 OFFICES DOING THE LARGEST REGISTRY BUSINESS IN THE COUNTRY.

It has been customary in past reports to list the names of the 60 post offices originating the largest number of paid registrations and to show the percentage of the registrations at those cities compared with the total registrations.

The list of those cities is omitted from this report, but the following statement shows the total registrations and the total number of articles insured at the 60 cities originating the largest number of paid registrations during the fiscal year ended June 30, 1913, and the per cent of the matter registered and insured at those offices compared, respectively, with the total number of pieces registered and insured in the entire country:

	Number of pieces.	Percentage compared with all offices.
REGISTERED.		
Paid	17,042,978	46.00
Official free, including matter registered on postal-savings business	2,492,230	49.50
Paid and official free	19,535,208	46.42
Distribution free, including matter registered on postal-savings business	977,594	69.52
Aggregate paid, free and distribution free	20,512,802	47.17
INSURED.		
Fourth class (domestic parcel-post mail)	1,364,658	52.59

Statistics have not been compiled to show the 60 offices which originated the largest insurance business in the country, but it is known that all of the 60 offices which originated the largest number of paid registrations are not identical with the 60 offices which originated the largest number of insured articles. It will be seen, however, from the foregoing statement that the 60 offices doing the largest registry business originated a higher percentage of insured than paid registered articles—namely, 46 per cent of the entire paid registrations and 52.59 per cent, or more than one-half, of the entire number of articles insured.

MONEY AND MONEY VALUES SENT IN THE REGISTERED MAIL.

The number and value of letters and parcels sent by registered mail during the fiscal year ended June 30, 1913, for the Post Office and Treasury Departments are shown in the following table:

	Number of pieces.	Value.
Postal funds received at post-office depositaries [1]		$58,225,877.51
Surplus money-order funds received for deposit [1]		659,042,968.37
Postage stamps from Division of Stamps	233,760	216,922,440.56
Postal cards sent from United States Postal Card Agency, Washington, D. C.	1,884	184,679.68
Stamped envelopes and newspaper wrappers sent from United States Stamped Envelope Agency, Dayton, Ohio	433,516	25,811,765.28
Stamped envelopes, newspaper wrappers, and postal cards sent by postmasters from 53 subagencies	150,856	9,698,336.24
Total for Post Office Department	820,016	969,886,067.64
Total received and sent by the Treasury Department, including the Auditor for the Post Office Department	267,424	1,921,692,667.92
Aggregate	1,087,440	$2,891,578,735.56

[1] Not all this amount was remitted by registered mail.

The above figures represent money and money values sent by registered mail during the year by the Post Office and Treasury Departments only. It is not practicable under the existing conditions to report the total values sent in the registered mails by the other executive departments and the public.

SPECIAL FEATURES OF THE REGISTRY SERVICE.

In addition to the registrations at post offices and post-office stations, mail is registered by city, rural, and marine carriers (the marine carriers being employed only at Detroit, Mich.), by navy mail clerks on board United States naval vessels, by sea post clerks, and under a special agreement by the Treasury and Navy Departments.

The following tables briefly show the operations of these special features of the registry service during the fiscal year ended June 30, 1913:

City-carrier registration.

Offices having city-delivery service	1,675
Number of city carriers	30,918
Letters registered	424,217
Average city-carrier registrations for each office	253

Rural-carrier registrations.

Offices having rural-delivery service	18,024
Routes in operation	42,805
Number of rural carriers	42,685
Letters and parcels registered	894,796
Registered letters and parcels delivered	1,508,756
Registered articles handled in transit	268,596
Total registered articles handled by rural carriers	2,672,148

Marine-carrier registration.

Number of pieces registered	39

Registrations on board United States naval vessels.

Paid	73,119
Free	174

Registrations by sea post clerks.

Number of pieces registered (paid)	886

Special official registrations.

Treasury and Navy Departments:	
Paid	171,431
Free	151,234
Total, paid and free	322,665

DISCONTINUANCE OF THE DISTINCTIVE REGISTRY STAMP.

Under date of November 1, 1911, announcement was made of the preparation of a distinctive registry stamp of 10-cent denomination to be used for the prepayment of the registry fee on registered matter, domestic or foreign. This stamp was offered for sale to the public beginning December 1, 1911, but ordinary stamps were permitted to continue to be used to prepay the registry fee when the distinctive registry stamp was not available. The idea of the introduction of this stamp was to more readily detect registered matter in the mails after the discontinuance of the use of registered-package envelopes. The misuse of this stamp, however, led to annoying complications in the service which were believed to offset any advantage that the stamp may have been intended to convey, and under date of May 28, 1913, the issue of this distinctive registry stamp was discontinued, provision being made for its acceptance until the supply was exhausted in the prepayment of the registry fee at mailing offices as heretofore, and in addition thereto for its acceptance at offices of delivery in the payment of any deficiency in postage on registered mail only which might be due.

SHORT-PAID INTERNATIONAL REGISTERED MAIL.

Under date of May 14, 1913, the Postal Laws and Regulations were amended to require postmasters at United States exchange offices to collect the deficiencies on short-paid registered mail originating in the United States for dispatch to foreign countries from the postmasters at the offices of origin. Prior to that date such de-

ficiencies were reported to the department for adjustment in the accounts of delinquent postmasters. This change facilitated the collection of deficiencies on such mail and relieved the Post Office Department of the labor incident to certifying such deficiencies and the Auditor for the Post Office Department of the labor necessary in making numerous charges of such amounts in postmasters' accounts.

INDEMNITY FOR LOST REGISTERED MAIL.

The following statement shows the number of domestic and international indemnity claims approved during the fiscal year ended June 30, 1913, the aggregate value of the lost mail, and the aggregate amount of indemnity involved:

	Number of claims.	Aggregate value.	Indemnity.
Domestic indemnity:			
First-class mail	2,942	$150,303.75	$37,259.41
Third and fourth class mail	587	4,205.97	3,900.32
Total domestic indemnity	3,529	154,509.72	41,159.73
International indemnity:			
Lost in the United States	696	3,278.29	4,354.37
Lost in foreign countries	476	5,571.25	2,939.12
Lost in transit	11	45.38	52.13
Total international indemnity	1,183	8,894.92	7,345.62

The average amount of indemnity per piece, domestic and international, is shown in the following statement:

	Fiscal year ended June 30 1913.	Entire period during which indemnity has been paid: Domestic (1899–1913), international (1908–1913).
Domestic indemnity:		
First-class mail	$12.66	(1)
Third and fourth class mail	6.65	(1)
Average domestic indemnity	11.67	$10.39
International indemnity:		
Lost in United States	6.26	6.20
Lost in foreign countries	6.17	6.55
Lost in transit	4.74	6.31
Average international indemnity	6.21	6.32

[1] Prior to the fiscal year 1913 no separate statistics were compiled relative to the indemnities paid on the different classes of domestic registered matter.

INSURANCE OF FOURTH-CLASS (DOMESTIC PARCEL POST) MAIL.

In accordance with the provisions of section 8 of the act of Congress approved August 24, 1912, establishing a domestic Parcel Post Service, provision was made for the indemnification of senders of such matter when lost, by means of insurance. At the inauguration of this service on January 1, 1913, a flat fee of 10 cents was charged, which insured an article against loss for its actual value, not exceed-

ing $50 in any one case. This fee prevailed during the entire remainder of the fiscal year. Effective July 1, 1913, this fee was reduced to provide for the insurance of articles against loss for their actual value, not in excess of $25 in any one case, upon payment of a fee of 5 cents, and not in excess of $50 upon payment of a fee of 10 cents.

During the six months from January 1 to June 30, 1913, inclusive, 2,595,185 parcels were insured at post offices in the United States. There were 1,090 claims approved during the same period on account of loss, rifling and total damage of such articles involving the payment of indemnities amounting to $10,385.60, an average of $9.53 per piece. From July 1 to November 1, 1913, inclusive, 1,016 insurance claims, amounting to $9,993.17, were approved, making a total of 2,106 parcel-post claims aggregating $20,378.77, chargeable to the fiscal year 1913, an average of $9.68 per piece.

COLLECT-ON-DELIVERY SERVICE.

The C. O. D. feature of the domestic parcel-post service was inaugurated July 1, 1913, just after the close of the fiscal year for which this report is rendered. It is impracticable at this time to furnish detailed statistics concerning C. O. D. mail. Every effort is being made to make this service attractive and satisfactory to the public, and the progress made thus far indicates that it is being increasingly patronized.

* * * * * * *

Very respectfully,

A. M. DOCKERY,
Third Assistant Postmaster General.

Hon. A. S. BURLESON,
Postmaster General.

REPORT OF THE FOURTH ASSISTANT POSTMASTER GENERAL.

POST OFFICE DEPARTMENT,
OFFICE FOURTH ASSISTANT POSTMASTER GENERAL,
Washington, D. C., December 22, 1913.

SIR: I have the honor to submit the annual report of the Fourth Assistant Postmaster General for the fiscal year ended June 30, 1913. I particularly desire to compliment the employees in all the divisions within the bureau upon the unusual improvement in efficiency under extraordinary conditions. Your particular attention is respectfully invited to the increased duties imposed upon them by reason of the enlarged postal revenues and the consequent addition to the force in the field without corresponding increase in the number of employees assigned to office work incident thereto.

DIVISION OF RURAL MAILS.

Notwithstanding the fact that there was a large increase in the general work of this division, embracing the establishment and readjustment of rural routes, the appointment and supervision of rural

carriers, the general supervision of the star-route service, and the establishment, discontinuance, and change of site of fourth-class post offices, all public business of this character was accomplished without increase in the clerical force. At the beginning of the present administration there was a large accumulation of cases on hand involving requests for the establishment and readjustment of rural routes, many of which had been pending for several years. By your direction these cases were given special attention, with the result that the number of petitions on hand for the establishment of rural routes was reduced from 805 on March 19, 1913, to 448 on June 30, 1913, and the number of cases involving changes in routes from 1,852 to 386. During the same period the number of cases outstanding involving investigations of charges of delinquency against rural carriers was reduced from 541 to 245. Since the end of the fiscal year this work has gone forward actively and cases involving investigations, as well as all other work in connection with the rural mail service generally, are now being disposed of promptly.

A "follow-up" and "reminder" system has been adopted, through which calls for progress on investigations and for replies to communications requesting information are made and attention directed to any matter which should be taken up at a stated time. Through these means the obtaining of necessary information and the taking of final action on any matter is expedited and cases are prevented from becoming dead or dormant.

Considerable additional work devolved upon this division by reason of the establishment of the parcel-post system. In accordance with the provisions of the postal appropriation act for the fiscal year 1913, the mails carried upon star routes were weighed during the months of October and November, 1912, and March and April, 1913. These reports (approximately 140,000 in number) have been reviewed and compared and increases have been granted in the pay of star-route contractors on routes where the weight of the mail handled has been materially increased by reason of the establishment of the parcel post. Reports have also been obtained of the number of pieces and the weight of mail of each class handled on rural routes during the month of June, 1913. The figures secured through these reports gave the department early information as to the volume of parcel-post business transacted in the rural districts.

RURAL CARRIERS.

During the year carriers to the number of 1,625 resigned; 211 died; and 180 were removed, a total of 2,016. The separations for the previous fiscal year numbered 2,578.

By reason of the adoption of a higher grade of examination, and because of the fact that the increased compensation allowed for serving rural routes has attracted a better qualified class of applicants, the personnel of the rural service has undergone a steady improvement, which is very gratifying, especially in view of the fact that the duties of a rural carrier, with the extension of postal facilities, are becoming much more responsible.

Within the past year as the result of the amendment of the civil service rules to permit such action, applications of many rural carriers for transfer to other branches of the postal service were granted.

In addition to the 15 days' annual leave allowed carriers by your order of June 18, 1913, they have been given the privilege of 30 days' leave without pay each year.

SCALE OF SALARIES.

In recognition of the increased complexity of the duties devolving upon rural carriers and of the steady increase in the volume of business transacted by them there has been a corresponding increase in their compensation. Under the last increase which became effective September 30, 1912, the following schedule of salaries was adopted and is now in effect:

Length of route:	Salary.
6 miles and less than 8	$484
8 miles and less than 10	528
10 miles and less than 12	572
12 miles and less than 14	616
14 miles and less than 16	660
16 miles and less than 18	770
18 miles and less than 20	880
20 miles and less than 22	990
22 miles and less than 24	1,056
24 miles and more	1,100

RURAL DELIVERY.

On March 3, 1913, there were 42,644 rural routes in operation, of which 456 had been established during the current fiscal year. From that date to June 30, 1913, there were 163 routes established and 2 discontinued, making a total of 42,805 in operation at the close of the fiscal year. To serve these routes 42,685 carriers were employed, whose annual salaries aggregated $45,377,442.

Routes to the number of 619, with an aggregate length of 14,779 miles, were established during the year, requiring the services of 616 additional carriers, while 13 routes, aggregating 256 miles, served by 12 carriers, were discontinued, leaving a net increase of 606 routes, 14,532 miles, and 604 carriers.

During the year 114 triweekly routes were established, while four were discontinued, with the result that at the close of the fiscal year there were 745 triweekly routes in operation.

On June 30. 1913, the total length of rural routes in operation was 1,038,076 miles; the daily travel 1,028,603, and the annual travel 315,781,124 miles. The average length of routes was 24.25 miles, the average cost per mile of routes $43.71, and the average cost per mile of travel was $0.1437.

The actual cost of the new service established during the year was $275,726.54, the annual rate being $582,846. The actual saving because of the routes discontinued was $4,322.89, and the annual rate $10,362. The net increase in actual cost was, therefore, $271,403.65, and the annual rate thereof $572,484.

During the year 254 routes were curtailed at an actual saving of $10,143.97, the annual rate being $20,687.22. On the other hand, 729 routes were extended at an actual cost of $26,322.96, and an increase in the annual rate of $66,034.

Triweekly routes to the number of 72 were made daily at an increase in actual cost of $13,715.71, and an increase in the annual rate of $35,622, while eight routes were converted from daily to triweekly at an actual saving of $1,866.67, and an annual saving of $3,458.

ESTABLISHMENT AND READJUSTMENT.

Growth of the service.

Fiscal year.	Routes.[1]	Appropriation.	Expenditure.	Increase in expenditure.
1897	82	$40,000	$14,840	
1898	153	50,250	50,241	$35,401
1899	412	150,032	150,012	99,771
1900	1,259	450,000	420,433	270,421
1901	3,761	1,750,796	1,750,321	1,329,888
1902	8,298	4,089,075	4,089,041	2,338,720
1903	15,119	8,580,364	8,051,599	3,962,558
1904	24,566	12,926,905	12,645,275	4,593,676
1905	32,110	21,116,600	20,864,885	[2] 8,219,610
1906	35,766	25,828,300	25,011,625	4,146,740
1907	37,728	28,200,000	26,661,555	1,649,930
1908	39,277	34,900,000	34,371,939	[3] 7,710,384
1909	40,628	35,673,000	35,661,034	1,289,095
1910	41,079	37,260,000	36,914,769	1,253,735
1911	41,656	38,860,000	37,125,630	210,861
1912	42,199	42,790,000	41,859,422	[4] 4,733,792
1913	42,305	47,000,000	45,655,593	[5] 3,796,171

[1] Apparent discrepancies between the figures in this column and in the corresponding column headed "Carriers" in previous annual reports are due to having been taken for periods other than fiscal years.
[2] Maximum salary of carriers increased from $600 to $720 per annum.
[3] Maximum salary of carriers increased from $720 to $900 per annum.
[4] Maximum salary of carriers increased from $900 to $1,000 per annum.
[5] Maximum salary of carriers increased from $1,000 to $1,100 per annum.

STAR SERVICE.

On June 30, 1913, there were in operation 12,432 star routes, aggregating 157,705 miles in length, as compared with 12,668 routes of an aggregate length of 160,323 miles on June 30, 1912. This was a decrease of 236 routes and a decrease of 2,618 miles. The annual travel on June 30, 1912, was 84,780,388 miles, and on June 30, 1913, was 83,257,062 miles, a decrease of 1,523,326 miles. The average number of trips per route per week was 5.076, a decrease of 0.007.

On July 1, 1912, there were 12,575 star routes in operation, with a total of 159,466 miles in length. During the fiscal year 730 routes, aggregating 10,207 miles in length, were established, and 873 routes, aggregating 11,164 miles in length, were discontinued. During the year 146 routes, at an annual cost of $65,390 and aggregating 1,494 miles in length, were discontinued on account of the establishment or extension of rural delivery.

The annual rate of cost for the service on June 30, 1913, was $7,047,717, an increase of $249,649; the average cost per mile of length of routes was $44.69, an increase of $2.27; the average cost per mile of travel was $0.0846, an increase of $0.0048.

The fines and deductions from the pay of contractors during the year amounted to $32,428.64; the remissions to $744.13, leaving net deductions aggregating $31,684.51

FOURTH-CLASS POST OFFICES.

During the fiscal year 985 offices were established and 1,694 were discontinued. Of these discontinuances, 451 were on account of extensions of rural delivery, the compensation of the postmasters at such offices aggregating $40,071.52 per annum.

DIVISION OF SUPPLIES.

During the fiscal year 1913, there were received and filled in this division 501,909 requisitions, an average of 1,645 for each working-day. This increase of approximately 9 per cent over the number of requisitions handled during the previous year, was largely due to the expansion of the Postal Savings System and the establishment of the parcel post. Among the supplies furnished were:

Official envelopes		75,000,000
Blank money-order forms		107,300,000
Printed facing slips		745,500,000
Blank facing slips		565,000,000
Twine	pounds	2,480,000
Ink	quarts	40,000
Mucilage	do	25,000
Carriers' satchels		13,500

In furnishing supplies, shipments were made largely by freight either from the division or direct from the contractor to final destination. The aggregate shipments by freight during the year were as follows:

	Number.	Pounds.
By this office	12,245	4,563,582
By agents in the field	7,712	7,233,772
	19,957	11,797,354

In pursuance of the policy heretofore announced, the shipment by freight, instead of by mail, of postal supplies for points in the first contract section, comprising the New England and Middle Atlantic States, was accomplished, and it is estimated that this will result in an annual saving of $18,000. A plan was devised to secure more favorable ratings on freight shipments of postal supplies, and with that end in view arrangements have been made to have a representative of the department at freight classification meetings in the future.

The practice of supplying the needs of larger post offices with certain articles which can be furnished in freightable lots direct from the factory has been greatly extended, thus effecting a saving of the difference between the cost of direct shipments by freight and former charges for freight from the factory to Washington and thence to the consumer.

Pending certain changes to be made in the design of letter boxes, their output during the year was greatly restricted, but it is hoped that this matter will be satisfactorily adjusted in the near future.

Upward of 50,000 parcel-post scales were purchased and distributed to post offices during the year, and the distribution of at least 35,000 additional scales, which has been arranged for, will be necessary to properly equip the service. A plan has been evolved to test periodically all scales in the postal service in order to insure their accuracy.

Arrangements have been made looking to the conservation of serviceable supplies in post offices of the fourth class which may be discontinued. Improvements have been made in a number of

blank forms, particularly letter carriers' directories, thus facilitating work and effecting economies in the expenditure for clerk hire.

The matter of economies in the use of jute twine has been taken up vigorously with postmasters and other postal employees during the past fiscal year with the result that there is already a noticeable decrease in the demands, and further economies in this particular may be expected in the future.

DIVISION OF TOPOGRAPHY

In addition to keeping corrected to date the 41 post-route maps; the division supervised the printing and distribution of the four quarterly editions of the post-route maps, a total of 20,000 sheets, representing 14,236 complete maps. There were also prepared and distributed 25,900 diagram maps for the Railway Mail Service.

The work of redrawing and revising the compilations of the post-route maps progressed satisfactorily considering the fact that an unusual amount of work was necessary in connection with the extension of the parcel-post system. A considerable saving has been effected by correcting the old drawings instead of making new drawings, as formerly. There were corrected monthly 436 post-route maps for the use of the various branches of the department. All mounting of maps for official use was done in the division, which resulted in a material saving. There were 4,654 post-route maps mounted for the use of the Postal Service and Members of Congress.

During the year there were 55 rural-service county maps drawn, making the total completed 918. There were also 543 local center maps drawn; corrections were made in 4,038 rural-service maps; and 22,785 blue prints of county and local center maps and miscellaneous drawings were made. A new electric continuous blue printing and washing machine and a blue print coating machine were purchased and installed during the year, which greatly increased the output, at the same time materially reducing the cost of production and greatly facilitating the work of distributing the blue prints to the postal service and to purchasers. The division prepared the drawings for the parcel-post base map, projected it on copper plate for engraving; supervised the transferring of the map from the copper plate to lithographic stones; and proofread and examined 393,225 prints of zone maps for 3,300 unit centers. There were 143,757 parcel-post maps distributed to the postal service and 44,279 to the public.

The sales of the year included 2,063 post-route maps and 3,203 county and 897 local center rural-delivery maps. The total proceeds from such sales were $3,440.95. The sales of parcel-post maps and guides for the year amount to $33,124.20.

DIVISION OF DEAD LETTERS.

The receipts of foreign and domestic letters and parcels in the division for the year aggregated 13,214,346, a decrease of 0.004 per cent from the receipts of the previous year. Of this number 6,440,944 pieces were restored to the addressees or senders and 6,895,264 unsigned letters, printed circulars, and miscellaneous communications without apparent value were destroyed. Valuable inclosures amounting to $67,599.34 and negotiable paper, money orders, etc., to

the nominal value of $7,584,478.37, were found to be contained in 945,173 letters and parcels. The revenue derived from unclaimed matter amounted to $31,645.19; and postage stamps to the value of $9,067.96 were found in such matter. The increase in receipts of undeliverable domestic matter for the year was below the normal rate of increase for several years past, indicating greater care on the part of the general public in preparing matter for the transmission as well as more efficient work in the postal service.

The dead letter bureau at Honolulu, Hawaii, received during the year 55,573 undeliverable letters and parcels, an increase of 5,677 over the preceding year. Of this matter 12,227 pieces were posted in foreign countries, an increase of 1,664 over the previous year.

There were received by the dead letter bureau at San Juan, Porto Rico, during the fiscal year, 31,769 pieces of undeliverable matter, a decrease of 2,517 from the receipts of the preceding year. Of the matter received, 4,698 pieces were posted in foreign countries, a decrease of 1,043 from the amount received in the previous year.

During the short period of time in which the operation of this division has been under the supervision of the present administration, many important changes have been made resulting in both efficiency and economy. Among the improvements effected or under consideration, the following may be mentioned: Undeliverable postal cards and post cards amounting to approximately 1,000,000 per month, were under the former practice forwarded by postmasters to the division of dead letters monthly, where they were disposed of as waste paper without further consideration. Postmasters are now directed to make final disposition at their offices of such undeliverable matter, thus reducing both the cost of transportation to the amount of $10,000 annually, and also the cost of handling the matter in the division.

The abnormal increase of undeliverable matter in the international mails amounting to 113,512 pieces during the year, demands that some remedy for this situation be found and steps are being taken accordingly.

The undeliverable parcels of third and fourth class matter received at the division during the year aggregated 313,094 pieces, an increase of approximately 10,000 over the preceding year. This increase, however, was not only a matter of importance owing to the number received, but also by reason of the material increase in the size of the parcels received incident to the extension of the domestic parcel post. The cost of transporting this class of matter, the expense of storing it in the Division of Dead Letters, and the maintenance of a clerical force in the division to properly handle the matter requires particular attention, and we are preparing amendments to the regulations to remedy the difficulty.

These and like improvements, including a reorganization and curtailment of the working force in the division, will result not only in expedition of the public business, but in a material saving to the department and the postal service as a whole.

FEDERAL AID IN ROAD IMPROVEMENT.

The plan as agreed upon for the expenditure of the appropriation of $500,000 made by Congress for the improvement of roads over which rural delivery service is in operation provided for the allotment of

$10,000 to each of the States, contingent on the State or its local subdivisions furnishing double that amount.

After every effort to produce material progress it was evident that very few of the States were in a position to meet the prescribed requirements, and it thereupon became necessary to revise the original plan of distribution. This new plan, which was approved by the Secretary of Agriculture and yourself as of April 21, 1913, provided for the allotment of the appropriation to sections of the country where different soil, climatic, and topographical conditions prevailed, the purpose being to undertake improvements in localities where the information sought by Congress could be secured to the best advantage.

In a very short time a number of favorable replies to offers of cooperation were received from the authorities in the States within the localities as agreed upon. Appropriate inspections of the designated highways were made by engineers of the Department of Agriculture, and allotments of funds from the Federal appropriation were definitely made by the Secretary of Agriculture and yourself. At the close of the fiscal year projects for cooperative road improvement in Maine, Maryland, Virginia, North Carolina, Georgia, Mississippi, Alabama, Texas, Kentucky, Tennessee, Ohio, Minnesota, Iowa, and Oregon had either been approved or were under investigation. In some of these States the actual work of construction was well under way.

Respectfully,

JAS. I. BLAKSLEE,
Fourth Assistant Postmaster General.

Hon. A. S. BURLESON,
Postmaster General.

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